A National Role Delineation Study of FMCSA Medical Examiners

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Prepared by

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The National Registry: A Roadmap to Improved Highway Safety

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EXECUTIVE SUMMARY

In passing the 2005 Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU), Congress required the Secretary of the United States Department of Transportation (DOT) to establish a national registry of medical examiners. The purpose was to improve highway safety by establishing and maintaining a national registry of medical examiners qualified to examine drivers of commercial motor vehicles (CMVs) and issue medical certificates.

To that end, the Federal Motor Carrier Safety Administration (FMCSA) began developing the National Registry of Certified Medical Examiners (NRCME) program to improve highway safety by producing trained, certified medical examiners who can effectively determine whether a CMV driver's health meets FMCSA standards. In order to realize a sound and representative testing and registry program, FMCSA is developing the NRCME with a focus on those elements of competent job performance common to medical examiners coming from a variety of professional backgrounds and work settings. Therefore, in order to 1) develop a blueprint for the medical examiner certification test and 2) capture demographics for a hidden population sample, FMCSA commissioned the following Role Delineation Study in 2005.

A role delineation study is intended to describe as much as is known about a set of competencies associated with a role in a work setting. In this case, a medical examiner qualifies or disqualifies a CMV driver based on an assessment of the driver's health status. Therefore, researchers examined the role these practitioners played in the driver qualification process. Because this study addressed only a subset of a typical practitioner's job, it is described as a "role delineation study" rather than the more wide-ranging "job analysis."

The following Role Delineation Study was conducted from 2005 to 2007. It was the first national study of medical examiners who conduct CMV driver physical examinations. Axiom Resource Management, Inc. (Axiom) was the primary coordinator of project management activities related to this study. Applied Measurement Professionals, Inc. (AMP) provided research expertise on the project. FMCSA staff was at all times an integral part of study development and implementation.

The Role Delineation Study included the following steps:

- Literature Review and Direct Observations
- Subject Matter Expert Recruitment
- Task List and Survey Development
- Sample Selection and Survey Implementation
- Sampling Bias, Demographic, and Task Analyses
- Detailed Content Outline Development
- Knowledge, Skills, and Abilities Statement Development

Literature Review and Direct Observations. AMP research staff began work on this study by conducting a systematic review of the available relevant literature. Multiple Federal statutes, proposals, reports, and standard and process summaries offered guidance about the approaches and outcomes associated with CMV driver physical

examinations. Research staff also reviewed textbooks authored by physicians experienced in applying Federal regulations to the physical certification of CMV drivers.

The next step was to conduct direct observations of medical examiners as they worked in the field. In August and September of 2005, a member of the AMP staff observed a small group of medical examiners as they completed CMV driver physical examinations. The observer witnessed all aspects of the physical examination process when possible, including any preliminary medical testing.

Recruitment of Subject Matter Experts. At this juncture, a major imperative was convening panels of medical examiner experts to assist in the design, implementation, and analysis phases. FMCSA, in conjunction with Axiom, selected a Working Integrated Product Team (WIPT) of medical examiners to serve as subject matter experts. The medical examiner population nationwide includes five known primary groups: (1) advanced practice nurses, (2) chiropractors, (3) doctors of osteopathy, (4) medical doctors, and (5) physician assistants. Staff from FMCSA, Axiom, and AMP met with medical examiners representing all five of the aforementioned medical professions during three regional meetings held in three cities: Chicago, Illinois; Falls Church, Virginia; and San Francisco, California.

FMCSA selected two representatives from each of the five professions for participation in the WIPT, forming a group of 10 members. FMCSA chose WIPT members to represent a variety of practice settings and geographic regions across the United States. Staff from FMCSA, Axiom, and AMP met with the WIPT to discuss and reach consensus about specific study methodology.

Task List and Survey Development. Researchers can use a variety of acceptable methods for a role delineation study, but a task inventory is the most common (Raymond, 2001). AMP staff synthesized data gleaned from the observations and the literature review, creating a preliminary task list of job competencies that would serve as the basis for the survey of medical examiners. During the medical examiner regional meetings, attendees iteratively revised this preliminary task list through brainstorming sessions. Then, using recommendations from these three brainstorming sessions, the WIPT developed the final set of task statements and background questions for a survey to measure the opinions of medical examiners about the criticality of each task.

A task inventory permits flexibility in how specific work behaviors are described. The inventory must be comprehensive, but expressing tasks with greater or lesser specificity permits some control over the length of the list. Since survey response rates tend to decline as survey length increases, choosing to develop tasks in a more general manner gave the WIPT an opportunity to encourage a high response rate by minimizing task list length. When the WIPT finalized the task list for the survey, it contained a total of 146 tasks.

Another advantage of a task inventory is that it yields objective information about each task's criticality for competent practice. In this case, survey respondents ultimately used a rating scale to interact with the task list. The scale permitted each respondent to indicate whether a task was a part of his or her practice; if it was, the respondent was directed to rate the importance of the task. While the task inventory method helps to remove subjectivity from the process, the goal is not to remove subjectivity completely. This study coupled the collective opinions of WIPT members with objective data to yield

content that thoroughly covered the competencies that were necessary to enhance safety but could still be defended as fair for the certification process.

Sample Selection and Survey Implementation. Since medical examiners have not been unified by a specific licensing or professional organization, they are considered a hidden population, one more difficult to reach and study given the absence of a sampling frame. Attempts to study hidden populations using standard sampling and estimation techniques often generate results that contain bias. Therefore, the use of alternative sampling methods is prudent.

One alternative approach that has been used to sample from a hidden population comes from network theory, where it is commonly referred to as respondent-driven sampling or snowball sampling. In snowball sampling, researchers identify individuals in their population of interest and ask these individuals to recommend others of the same population for participation in the study. Using this approach, Axiom staff contacted professional groups that had medical examiners among their members, recruiting an initial base of potential participants. From that foundation, Axiom spread word of the study to a wider range of medical examiners of CMV drivers, using a substantial word-of-mouth campaign, direct mailings, and FMCSA Web site notices.

Given the length of the task list and the time associated with thoughtful responding, the combined team of FMCSA, Axiom, and AMP personnel decided to use a paper survey format to encourage portability and ease of completion for respondents. Ultimately, AMP distributed surveys by mail to 4,082 FMCSA medical examiners identified by Axiom using the recruitment approaches described above. Each medical examiner who received a survey was aware of the proposal for a national registry and had actively agreed prior to the mailing to participate in the study. Therefore, the sample was characterized as a group that had opted into study participation.

Throughout the study, the WIPT and study staff took several steps to encourage a high survey response rate. First, the WIPT opted for a more general list of tasks rather than a longer, more detailed list; the latter required substantially more respondent burden in the form of time and effort. Starting with an opt-in sample also encouraged a high rate of response, ensuring that surveys were sent only to individuals who had expressed an interest in participating. Prior to the survey mailing, study personnel sent a postcard to each volunteer participant to alert him or her to expect the survey. Another measure designed to increase response rate was a follow-up letter that encouraged recipients to complete the survey and directed them to request replacements if they had misplaced their originals. This follow-up letter served a second purpose, that of permitting recipients to opt out of full survey participation by responding to a short survey of demographic questions. This opt-out sample permitted a follow-up study of non-response bias. Axiom staff sent weekly email updates to the entire sample, encouraging them to respond to the survey or to request a replacement survey if needed. Finally, study staff extended the deadline for returning surveys by 2 weeks to permit willing participants more time to comply.

A volunteer sample of 2,297 chose to submit full survey responses. However, 10 individuals contacted AMP and indicated they either were not qualified or were no longer interested in completing the survey. Another 22 surveys were returned without responses because of inaccurate addresses. Therefore, the corrected return rate was

56.7%. When the WIPT reconvened to assess survey responses, AMP staff informed them that this response rate was much higher than is typically observed for other studies of this type; given this outcome, the methods used to encourage responding appeared to have had the intended effect. An additional 891 responses were collected from the follow-up survey, which contained only demographic questions. Including results obtained from both surveys, a total of 3,188 responses (2,297 from the full survey + 891 from the follow-up survey) were obtained from the sample. The total combined response rate for both surveys was 78.7%. However, because survey responses were anonymous, it is possible that some medical examiners completed full- and follow-up surveys, so the combined response rate may be an overestimate.

Sampling Bias Analyses. As indicated, medical examiners who qualify CMV drivers are not conveniently listed for reference in sample surveys. Because study sample members are therefore not selected from a sampling frame (a list of the population from which the sample is drawn), snowball samples are subject to numerous biases. To correct for sampling bias in this study, study staff conducted network analyses as a way of assessing the impact of any potential sampling bias.

Data to assess this effect were collected from the following survey question: “How many people in each of the following groups do you know who also perform CMV physical examinations?” Respondents in the sample were broken down into the five aforementioned subgroups of advanced practice nurses, doctors of medicine and osteopathy, physician assistants, and chiropractors. Linear models were used to adjust the results. Although the network analyses showed some bias, they also showed that this was not disruptive and did not change the overall outcome of the survey results. Adjustment for this effect did not, in any instance, diminish the importance of any task. Therefore, the following results of the survey stand.

Demographic Analyses. Responses to questions in the background information section of the survey helped describe the characteristics of the sample, a particularly important study element given that sample members are part of a hidden population.

Analyses of demographic data produced the first insights into sample characteristics, including the following:

- Respondents had an average of 17.3 years of experience in their current professions.
- They completed a mean of 43.5 FMCSA physical examinations monthly.
- Respondents had been conducting FMCSA CMV driver physical examinations for an average of 12.1 years.
- Approximately two-thirds (66.7%) of respondents reported having had training in occupational health.
- Few (27.7%) had attended training courses for CMV driver physical examinations, supporting the need for training in this area.
- The majority of respondents (95.3%) reported clinical practice as their primary job function.
- Approximately one-half of respondents reported primarily working in occupational health.
- There was roughly equal representation of urban, suburban, and rural communities in the sample.
- Nearly two-thirds (63.7%) of respondents were male.

- The majority of respondents (88.7%) identified their racial and ethnic background as white, non-Hispanic.

WIPT members reviewed responses to all of the survey background questions and indicated that, given their experience, the sample was sufficiently representative to serve as the basis for certification test development.

Task Analyses. Studies of this kind should yield a thorough description of the role in question. It should be clear at the study's conclusion that no content critical to a complete role description was omitted. The study prompted respondents to assess whether the role was adequately covered by the task list. Nearly every respondent (95.8%) found the task list to be adequate, supporting the assertion that no critical content was omitted.

If ratings are to be useful for identifying content that is critical to certification tasks, they must contain a minimum of observed error. Minimal error is associated with high reliability. The WIPT reviewed two types of reliability statistics associated with task ratings: intraclass correlations and coefficient alphas.

The WIPT first reviewed intraclass correlation values for each content domain. During a standard role delineation study, items are typically allocated to content domains after the task quality assessment. These content domains represent the overarching categories within which specific tasks are grouped. The intraclass correlation values for these domains reflected the likelihood that other samples of medical examiners would give the same ratings provided by the medical examiner sample in this study. Intraclass reliability values were very close to the maximum possible value, supporting WIPT members' confidence in using task ratings from this sample.

WIPT members assessed a second reliability coefficient, coefficient alpha, to determine whether task ratings were consistent within each content domain in the task list. Because coefficient alpha values for content domains were also very high, the WIPT had confidence in the outlined organization of tasks; these high coefficient alpha values further supported their confidence in the final set of task ratings.

In addition to evaluating the adequacy of the task list and the reliability of the task ratings, the WIPT evaluated the aforementioned demographic characteristics of respondents in order to understand the target audience of medical examiners. WIPT members were interested in learning whether respondent characteristics were consistent with those of the largely unknown population of medical examiners, so that they could be confident using respondent task ratings. Such confidence was crucial, since a potential use of the ratings would be to determine which non-critical tasks to exclude from the list.

After concluding that the typical respondent seemed well versed in conducting physical examinations of CMV drivers and that the sample included representatives of important population subgroups, the WIPT systematically established rigorous task exclusion rules, the next step in the Role Delineation Study process. First, given that every task was performed by at least two-thirds of the study sample, the WIPT concluded that no tasks should be excluded on the basis of performance frequency. Next, the WIPT considered potential thresholds in relation to task importance ratings. All tasks received a mean rating of at least "above average"; therefore, they retained all under the second

exclusion rule. Finally, the group focused on whether tasks that were critical for the whole sample also were critical for subgroups within the sample. This resulted in a 13-hurdle approach in which surviving tasks would be labeled “critical.” Each task was subjected to this 13-step process and, again, the group retained all tasks. Applying all exclusion rules ultimately resulted in the retention of all 146 tasks, indicating that all could become a basis for program competencies defensible as fair for medical examiners who perform physical certifications of CMV drivers. WIPT members also kept the original outline under which they had organized these tasks.

Detailed Content Outline Development. Once the WIPT had identified the competencies the test should cover, the group began test specification development. Test specifications describe the distribution of items on a test form by content domain and complexity level. Assigning cognitive levels to tasks is the accepted manner in which complexity level is established. To assess the potential complexities of each task, the WIPT decided to use the three-level cognitive dimensions of recall, application, and analysis as defined by AMP staff. By limiting the cognition of test items associated with simple tasks and considering cognition when specifying items for the test, test scores are more likely to align with competence. A full consensus of WIPT members assigned a cognitive complexity level to each of the 146 tasks. Next, the WIPT specified the number of items for each content domain and for each cognitive level within each domain. When doing so, they returned to decisions they had made about task complexity to help decide how best to distribute items within content domains. The result was a document called the Detailed Content Outline. It summarized: (1) tasks that could be tested on a certification test, (2) the complexity of test items linked to each task, (3) the number of items by content domain, and (4) the number of items by cognitive level within each domain. The outline will serve for several years as a stimulus for test items and as a blueprint from which certification test forms will be developed.

Knowledge, Skills, and Abilities Statement Development. Because the legislative mandate for a national registry included a training component, as their final activity the WIPT developed statements that described the knowledge, skills, and abilities (KSAs) associated with each task in the Detailed Content Outline. Task statements purposefully describe the behaviors that are observable in medical examiners as they conduct physical examinations of CMV drivers. These statements do not directly identify the KSAs on which examiners draw or that support competent task performance.

The WIPT produced KSA statements to ensure this supplemental content was identified. Training and testing content are expected to align closely. Therefore, the starting point for each KSA statement was a task from the Detailed Content Outline. First, Axiom and FMCSA staff identified knowledge statements that supported the competent performance of each task. The WIPT then verified these knowledge statements. Then, as appropriate, the WIPT developed skill and ability statements to describe the underlying attributes on which competent task performance also relied. In this way, KSAs were tied directly to the Detailed Content Outline, which should encourage standardized training of medical examiners.

Summary of Findings.

Sampling bias analysis:

- Network analyses were conducted as a way of assessing the impact of any potential sampling bias. Although the results of these analyses indicated some bias, they also

showed that it was not disruptive and did not change the overall survey results. Adjustment for this effect did not, in any instance, diminish the importance of any task. Therefore, the results of the survey stand.

Demographic analysis:

- Respondents were experienced professionals. Not only did they have an average of 17.3 years of experience in their current professions, they completed a mean of 43.5 FMCSA physical examinations monthly and reported having performed FMCSA CMV driver physical examinations for an average of 12.1 years.
- However, while approximately two-thirds (66.7%) of respondents reported having had training in occupational health, few (27.7%) had attended training courses for CMV driver physical examinations, supporting the need for training in this area.
- Respondents were members of the population of interest. The vast majority of respondents (95.3%) reported clinical practice as their primary job function, and about one-half of respondents reported primarily working in occupational health.
- There was roughly equal representation of urban, suburban, and rural communities in the sample, an indication that medical examiners are accessible across all community sizes and locales.
- Nearly two-thirds (63.7%) of respondents were male; the majority of respondents (88.7%) identified their racial and ethnic background as white, non-Hispanic. WIPT members indicated that these and the other demographic findings were reflective of their anecdotal experience with colleagues.

Task analysis:

- Nearly every respondent (95.8%) found the task list to be adequate, supporting the assertion that all critical content was captured.
- Intraclass reliability values were very close to the maximum possible value, supporting WIPT members' confidence in using task ratings from this sample.
- Because coefficient alpha values for content areas were also very high, the WIPT had confidence in the outlined organization of tasks; these high coefficient alpha values further supported their confidence in the final set of task ratings.

Limitations. Limitations of this study should be acknowledged. As indicated, the population of interest was largely hidden, so no sampling frame existed from which to draw a random study sample. Therefore, researchers used a convenience sample of volunteers. Although responses from approximately 78% of the 4,082 volunteers were obtained, many practitioners who performed CMV driver physical examinations were not included.

For example, FMCSA estimates that 40,000 medical examiners will be needed to qualify CMV drivers. Assuming that there are tens of thousands of practitioners who perform these examinations, the substantial efforts of Axiom staff to recruit volunteers for the Role Delineation Study identified only a small fraction of the population. Given these assumptions, these results can extend only to those individuals who gave survey responses. In order to generalize the results of the Role Delineation Study with confidence, the population would have to be studied further—ideally after the establishment of a definitive sampling frame.

The NRCME would eventually generate a definitive sampling frame, so future studies of the medical examiner role should be able to proceed with fewer unknown sources of potential variability. Further role delineation studies may be used as tools beneficial to

maintaining the relevance of certification test content. These studies may also present opportunities for fuller descriptions of the medical examiner population.

INTRODUCTION

SAFETEA-LU requires the Secretary of Transportation to establish and maintain a current national registry of medical examiners that are qualified to perform examinations and issue medical certificates verifying whether a commercial motor vehicle (CMV) driver's health meets the FMCSA standards. In addition, SAFETEA-LU requires that:

- The physical examinations of CMV drivers are performed by medical examiners who have received training in physical and medical examination standards.
- Medical examiners are listed on a national registry after it is established.

FMCSA is developing the NRCME program as one initiative to improve highway safety by producing trained, certified medical examiners who can effectively determine whether a CMV driver's health meets FMCSA standards. FMCSA's goal is to improve safety and reduce fatalities on our Nation's highways by 41 percent from 1996 to 2008. FMCSA determined that focusing on medical examiner performance is one component of reaching this goal.

Once the NRCME program is implemented, FMCSA will accept only physical examinations performed by medical examiners listed on the NRCME. It is projected that the NRCME program will require medical examiners to complete training developed from standardized curriculum specifications and pass a national certification test.

BACKGROUND

Because a CMV, a bus or tractor-trailer, is large in comparison to other vehicles in a typical highway environment, a driver's loss of control of a CMV could have significant negative effects on public safety. Thus, there is a public interest to: (1) ensure drivers are physically able to control a CMV and (2) limit the probability drivers might be incapacitated by a medical condition while driving.

Drivers first became subject to Federal regulations with the 1935 Motor Carrier Act. Hours of service limits were instituted shortly thereafter, as were visual acuity requirements. Medical standards were initiated in 1939 and extended to physical and mental health, auditory capabilities, and restrictions against drug and alcohol use. Physical examination and medical certification were required of drivers by 1954. Guidelines for the evaluation of drivers in high-risk medical categories were available by 1970. The Motor Carrier Safety Act of 1984 directed the Secretary of Transportation to ensure the physical condition of each driver was adequate for safe CMV operation by establishing minimum safety standards.

SAFETEA-LU requires the Secretary of Transportation to establish a national registry of medical examiners. To this end, FMCSA is developing the NRCME program. Medical examiners listed on the NRCME would examine interstate CMV drivers and certify those who are physically qualified. Because approximately 6-7 million CMV drivers must be recertified at least every 2 years, drivers will require access to a large pool of certified medical examiners. As many as 400,000 medical examiners could qualify for the NRCME, although an initial pool of 40,000 is anticipated.

Two critical components of the NRCME program include training medical examiners and certifying their abilities to assess incapacitating health conditions in CMV drivers. Early evidence of interest in a certification program for medical examiners of CMV drivers dates to 1978, when only physicians could certify drivers. A weakness of that system included a lack of physicians who understood the relationship between driver health and CMV interstate operation.

Federal Motor Carrier Safety Regulations (FMCSRs) were amended in 1992 to expand the pool of potential medical examiners, adding advanced practice nurses, chiropractors, and physician assistants in order to supplement the medical doctors and doctors of osteopathy who had been examining drivers since regulations were initiated.

Two events occurred in 1999 to stimulate development of a national registry. **First**, FMCSA was established by law within the DOT. **Second**, a multi-fatality crash involving a CMV occurred. The driver's health history revealed disorders in multiple organ systems, though the driver possessed a valid medical certificate. To enhance public confidence in the CMV driver physical qualification process, FMCSA planned a formal program for medical examiner certification and listing on a national registry. The NRCME program would include a test of each medical examiner's competency to evaluate driver abilities to operate CMVs safely. The test would also assess examiner ability to reach an appropriate decision to physically qualify or disqualify drivers.

THE ROLE DELINEATION STUDY

FMCSA commissioned this Role Delineation Study in 2005 to identify content for the certification component of the NRCME program, which is intended to focus on competencies common to FMCSA medical examiners from a variety of professional backgrounds and work settings. Study results were intended to inform FMCSA's efforts to develop medical examiner certification.

METHODOLOGY

THE TASK LIST

Because projected plans for medical examiner certification include a test, development of the test should conform to commonly accepted standards for tests. The United States Code of Federal Regulations (29 CFR 1607.14, Uniform Guidelines on Employee Selection Procedures) directs that test content should be limited to behaviors that can be directly observed. Additional applicable testing standards have been described by organizations intimately involved in testing (the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education). These organizations produced the Standards for Educational and Psychological Testing (1999), which provided additional guidance for conducting this study.

A task statement describes each observable behavior. A series of task statements organized into an outline is typically referred to as a task list. In this case, the task list should thoroughly describe the role of a medical examiner. The purpose of the outline is to provide a structure for specifying the items selected for a certification test. Test items will be limited to content described by task statements in the task list that have been identified as “critical” by a role delineation study.

Task statements were written with utility as a training objective, focusing test developers on medical examiner competencies. The outline of the test would not only provide a blueprint for developing the test—each version of which is called a test form—but also give structure to planning the training.

LITERATURE REVIEW

Three sources of information were available as catalysts for task statements. First, study staff reviewed all relevant sections of Title 49, Subtitle B, Chapter III of the United States Code of Federal Regulations, published October 1, 2004. These included section 391.41, which describes physical qualifications for CMV drivers. Section 391.43 was included, which describes the driver physical examination process. Study personnel also reviewed the Medical Examination Report form for Commercial Driver Fitness Determination, the driver’s role, and the description of qualified drivers, all from section 391.43. In addition, they reviewed instructions to medical examiners, including FMCSA advisory criteria regarding disorders and dysfunctions sometimes presented by drivers during physical examinations. Section 391.49 described alternative physical qualification standards for the loss or impairment of limbs. Finally, section 391.64 described a process for grandfathering drivers who had been in the vision and diabetes waiver study programs.

The second and third primary sources were textbooks. Both books were authored by physicians who had: (1) conducted physical examinations for driver certification, (2) instructed other medical examiners on conducting physical examinations, and (3) consulted with FMCSA regarding driver qualification standards. Hartenbaum’s book (2003) addresses the examination process, describes specific medical conditions and disqualification criteria, and briefly addresses typical health risks for drivers. Wittels’

book identifies regulatory sources that affect the conduct and outcome of physical examinations for drivers. It also addresses specific problems with each body system (e.g., cardiac, vascular, endocrine, vision, and neurologic).

Each of these sources conveyed details about applicable Federal regulations and articulated disqualification standards. Research staff conducted this review to translate information into task statements that describe what a typical, competent medical examiner may do over the course of a career in conducting physical examinations for many CMV drivers.

WORKING INTEGRATED PRODUCT TEAM

The evidence gathered in this Role Delineation Study supports the claim that competency expectations for the program should be built around the content identified by the study. FMCSA and the Axiom-AMP team recognized the crucial role that subject matter experts would play in this process. Therefore, a Working Integrated Product Team (WIPT) was formed. FMCSA, in conjunction with Axiom, recruited and selected WIPT members to represent professionals who medically qualify CMV drivers across the United States. These professionals represented the following groups: (1) advanced practice nurses, (2) chiropractors, (3) doctors of osteopathy, (4) medical doctors, and (5) physician assistants.

WIPT members are listed in Table 1. Members represented a variety of regions and professional backgrounds because it was important for this study to capture roles and responsibilities that could be considered universal. Each WIPT member had performed the medical examiner role for several years, during which time each had seen hundreds of drivers. Therefore, they were considered subject matter experts capable of identifying competency expectations for other medical examiners.

A task inventory survey of FMCSA medical examiners was the methodological model for this study. Researchers expected competency selection decisions that would be made during the study to be more objectively informed by survey responses. A task inventory also gave the WIPT some level of control over the length of the survey and the associated imposition on respondents' time, ultimately affecting the rate of response. Researchers sought a high response rate for this study so that WIPT members could be confident survey results were relatively free from error. A task inventory model is the most common for a role delineation study (Raymond, 2001), so others who have developed certification programs would be expected to be familiar with the methods used in this study.

Table 1
Working Integrated Product Team Members

WIPT Member	Location
Jim Ausfahl, MD	Peoria, Illinois
Karen Yurch Horn, BSN, MSN, NP	Orinda, California
Vaunzell Linnville, MSPA-C	Woodbridge, Virginia
Michael Megehee, DC	Pendleton, Oregon
Dennis Phillips, DO	Wauwatosa, Wisconsin
Tim Pinsky, DO	Marlton, New Jersey
Edward Seidel, MD	Linthicum, Maryland
Clinton M. Smith, DC, CICE	Breese, Illinois

Karl Wagner, PA-C	Southfield, Michigan
Leah Williams, APRN-CS, MSN	Holland, Michigan

DIRECT OBSERVATIONS

Overview

Task content was further developed through direct observations of medical examiners performing physical examinations on CMV driver candidates.[1] These observations, conducted during August and September of 2005 by a representative from AMP, were part of the formative phase of developing the task list. Research staff identified medical examiners to be observed; selection of participants was constrained by three factors: the fact that only one observer was available to perform all of the observations, the limitation of a 4-week completion window, and the requirement that two individuals from each medical profession be observed. These medical examiners would ideally perform routine CMV driver physicals so that they could provide an observation opportunity on the day the observer was on site.

To encourage geographical diversity, study staff scheduled half of the observations within driving distance of AMP and the other half within driving distance of Axiom. Study personnel identified individuals by networking and communicating within the professional community. Initial network contacts started with participants who had attended the June 2005 FMCSA public meeting that introduced the NRCME program.

A research staff member observed 10 medical examiners: two medical doctors (MDs), two doctors of osteopathy (DOs), two advanced practice nurses (APNs), two physician assistants (PAs), and two chiropractors (DCs). Observed examiners came from the greater metropolitan areas of Kansas City, Missouri; St. Louis, Missouri; Washington, DC; and Baltimore, Maryland. Five of the medical examiners were male and five were female.

A research staff member observed the physical examination of 11 CMV drivers. Ten of the drivers were male and one was female. Nine of the drivers were medically certified by the medical examiners; one driver was disqualified, and one driver was asked to return the next day for additional testing.

Prior to the observation, the observer explained the process and goals for these observations to each examiner and driver. Both the examiner and the driver signed consent forms prior to beginning the observation period. The observer watched all aspects of the physical examination process whenever possible, including any preliminary tests (e.g., vital signs) conducted by medical assistants.[2] The observer left the room when examiners performed hernia checks on male candidates. Because the observer had been involved in the literature review, the physical examination process

[1] No actual driver candidates were available for the chiropractor in the DC area, so an observation was conducted through a simulated physical examination performed on an employee.

[2] Medical assistants could not be observed for the MD in Kansas City and the DO in Washington, DC. Their duties were obtained from interviews with their respective medical examiners.

was familiar to him, even though he was not a medical professional. The researcher used a standard form developed by AMP to collect information from these observations.

Interview Questions and Responses

After each examination, the observer asked the medical examiner questions to clarify any uncertain issues. The observer also asked seven standard interview questions of each medical examiner. Listed below are responses to each interview question from each examiner.

1. **Approximately how many DOT physical examinations do you perform every week/year?**
   - Advanced Practice Nurses
     - Kansas City – 10 per week
     - DC Area – 25 per week
   - Chiropractors
     - St. Louis – more than 2 per week
     - DC Area – 4 per year
   - Medical Doctors
     - Kansas City – 30 per week
     - DC Area – 7 per week
   - Doctors of Osteopathy
     - Kansas City – 10 to 30 per week
     - DC Area – 20 per week
   - Physician Assistants
     - DC Area – 5 per week
     - Baltimore – 8 per week

2. **Approximately how long does the average DOT physical examination take to complete? (Time spent with the medical examiner, not medical assistants.)**
   - Advanced Practice Nurses
     - Kansas City – 7 minutes
     - DC Area – 15 to 20 minutes
   - Chiropractors
     - St. Louis – 10 minutes
     - DC Area – 15 minutes
   - Medical Doctors
     - Kansas City – 10 minutes
     - DC Area – 12 to 18 minutes
   - Doctors of Osteopathy
     - Kansas City – 5 to 7 minutes
     - DC Area – 10 minutes
   - Physician Assistants
     - DC Area – 15 to 20 minutes
     - Baltimore – 30 to 40 minutes (This medical examiner performed all tests himself.)

3. **Upon what guidelines do you base your examination protocol?**
   - Advanced Practice Nurses
     - Kansas City – DOT guidelines, employer's guidelines (OHS Compcare)
     - DC Area – DOT guidelines, employer's guidelines (Concentra)
   - Chiropractors
     - St. Louis – DOT guidelines, Bates book (1995)
     - DC Area – DOT guidelines
   - Medical Doctors
     - Kansas City – DOT guidelines
     - DC Area – DOT guidelines, Hartenbaum book (2003), FMCSA online
   - Doctors of Osteopathy
     - Kansas City – DOT guidelines, Hartenbaum book (2003), client organization's specifications
     - DC Area – DOT guidelines, employer's guidelines (Concentra)
   - Physician Assistants
     - DC Area – DOT guidelines, employer's guidelines (Prince William Occupational Health)
     - Baltimore – DOT guidelines, Hartenbaum book (2003)

4. **How long have you been performing DOT physical examinations?**
   - Advanced Practice Nurses
     - Kansas City – 3 years
     - DC Area – 8 years
   - Chiropractors
     - St. Louis – 11 years
     - DC Area – 20 years
   - Medical Doctors
     - Kansas City – 5 years
     - DC Area – 3 years
   - Doctors of Osteopathy
     - Kansas City – 11 years
     - DC Area – 8 months
   - Physician Assistants
     - DC Area – 1 year
     - Baltimore – 13 years

Responses to Questions 5 and 6 were related, so statements from each examiner are presented together in Table 2.

5. **Please give an example of a case (or cases) you found to be very challenging regarding a disqualification decision.**

6. **For the example you cited, what is the critical information that permits you to make an informed decision?**

Table 2
Examiner Responses to Interview Questions

Medical Examiner	**Question 5: Challenging Cases**	**Question 6: Critical Information**
Medical Doctor ***Kansas City***	**Necessary medications that may impair driving ability (e.g., migraine medications that sedate)** The medication may be required for the candidate to control a medical condition, but interactions and side effects may create new hazards for driving.	A report from the candidate's primary care physician about the status of his/her condition stating how well he/she controls the condition will typically suffice.
Doctor of Osteopathy ***Kansas City***	**Psychological problems** Some disorders may cause the candidate to experience mood swings or altered states of consciousness. In addition, sometimes medications used to counter effects of mental illness can create side effects that may interfere with safe driving.	The final decision will depend on the psychiatrist's opinion, the candidate's mental stability, and effects of the prescribed medication for his/her condition.
Chiropractor ***St. Louis***	**Borderline blood pressure** Because no instrument yields a perfectly precise measurement of blood pressure, borderline cases can be difficult to judge, especially when the candidate has a history of normal blood pressure.	The candidate's medical history showing normal blood pressure will aid in the final decision, along with results in the normal range.
Advanced Practice Nurse ***Kansas City***	**Hematuria** Blood in the urine can sometimes be caused by consuming large quantities of coffee or tea.	A report from the primary care physician indicating no history of disorders indicated by hematuria will typically suffice.

Medical Examiner	Question 5: Challenging Cases	Question 6: Critical Information
Medical Doctor ***Washington DC***	**Company pressure** Organizations will sometimes try to exert pressure on a medical examiner to force him/her to certify a candidate. **Sleep apnea** Many symptoms can indicate the possibility of sleep apnea, but it can be difficult to determine whether or not a candidate actually suffers from this disorder based on the information gathered from the physical examination.	Examining the patient's sleep history and communicating with his/her sleep partner will often yield information regarding sleep apnea.
Doctor of Osteopathy ***Washington DC***	**Mild cases of diabetes** Some drivers may have mild cases of diabetes controlled with diet. These drivers may show a trend indicating his/her diabetes may soon require insulin control.	A report from the candidate's primary care physician will typically suffice.
Chiropractor ***Washington DC***	**Abdominal aortic aneurysm** An aneurysm can burst without warning and can be difficult to identify during the examination.	If a problem is detected, its severity will determine the final decision. If the candidate is in danger, he/she will be referred to a hospital for immediate care.
Advanced Practice Nurse ***Washington DC***	**Orally-controlled diabetes** Level of control can be difficult to judge during the examination.	A report from the primary care physician will typically suffice.
Physician Assistant ***Washington DC***	**Co-morbid problems (e.g., diabetes not requiring insulin and a history of hypertension, but none present at the time of the examination)** Multiple interacting issues can complicate the final decision.	The medical examiner will consider candidate's age, health risks (e.g., smoking), and documentation from his/her primary care physician regarding any problematic conditions.
Physician Assistant ***Baltimore***	**Borderline blood pressure, diabetes** Same comments as above, blood pressure and diabetes problems interact.	If a candidate shows borderline blood pressure, the medical examiner will ask the candidate to come back. The medical examiner will clear the candidate to drive after he/she shows normal blood pressure levels on three separate visits.

7. **Do you have any additional comments or suggestions for the DOT physical examination procedure?**
   - Advanced Practice Nurses
     - Kansas City – There needs to be more driver education about the process so they come prepared for the examination.
     - DC Area – Make terms in the history section easier for the drivers to understand. Drivers and/or examiners rarely clarify "yes" responses on the history section.
   - Chiropractors
     - St. Louis – The DOT guidelines are sufficient.
     - DC Area – Examiners need to be more thorough checking for abdominal aortic aneurysms.
   - Medical Doctors
     - Kansas City – The DOT guidelines are sufficient.
     - DC Area – A licensure exam is a good idea. It can be difficult to catch dishonest driver candidates.
   - Doctors of Osteopathy
     - Kansas City – It is important for examiners to perform the full exam.
     - DC Area – Need to expand neurological tests (e.g., cranial nerve function).
   - Physician Assistants
     - DC Area – The guidelines for diabetes are vague. There are no strict guidelines regarding what constitutes adequately controlled diabetes (non-insulin controlled).
     - Baltimore – At my facility, I can ensure the candidate goes to the doctor before he/she is cleared to drive. Because of my position, I have more leverage.
       This medical examiner works in-house for a trucking organization. Drivers must be certified by him for clearance to drive.

Observed Tasks

Table 3 contains the task list that resulted from the AMP literature review. As indicated, AMP staff directly observed medical examiners, each of whom conducted the physical examination of a CMV driver. Table 3 shows the interactions between the observations of medical examiner behavior with potential task statements. The behavior of each examiner is notated using the key shown below. Regional brainstorming groups reviewed these notations and considered them when recommending changes to the task list (see next section of this report for more detail on these sessions). The WIPT later considered notations from observations and recommendations from the regional brainstorming groups.

Medical Examiner Key

The AMP researcher observed 10 medical examiners (MDs, DOs, APNs, PAs, and DCs). Researchers coded examiner behaviors as follows:

- 1, 2 = Medical Doctor
- 3, 4 = Doctor of Osteopathy
- 5, 6 = Doctor of Chiropractic
- 7, 8 = Advanced Practice Nurse
- 9, 10 = Physician Assistant

Table 3

Draft Task List after the Literature Review and Observations

Medical Examiners of Commercial Motor Vehicle Drivers		
Introduction: Drivers of commercial motor vehicles who cross state boundaries require certification from FMCSA of the United States DOT. Driver certification requires an examination by a licensed medical professional. Only drivers whose physical and cognitive abilities permit them to perform their responsibilities without disproportionate risk to others should be certified. Drivers whose medical conditions are likely to predispose them to sudden incapacitation should be disqualified from certification. This outline is intended to define tasks associated with the medical evaluation.		
I. REQUIREMENTS OF COMMERCIAL MOTOR VEHICLE DRIVERS		**Performed By:**
A. Work Responsibilities		
1. Distinguish among drivers who primarily work in (1) turn around/short relay, (2) straight through haul/cross-country, and (3) team driving settings	1.	ALL
2. Describe typical maneuvers of a driver's ▪ hand while performing precision prehension and power grasping ▪ arm, foot, or leg associated with vehicle operation	2.	N/A[a]
3. Describe physical requirements required to regularly perform the following while maintaining control over the vehicle ▪ manipulate an oversized steering wheel ▪ shift through several gears using a manual transmission	3.	N/A
4. Describe physical requirements required to perform the following after a prolonged period of relative inactivity ▪ couple and uncouple trailers from a tractor ▪ load or unload several thousand pounds of freight ▪ install and remove tire chains ▪ manipulate and secure tarpaulins that cover open trailer ▪ move one's own body through space while climbing ladders; bending, stooping, and crouching; entering and exiting the cab	4.	N/A

5. Explain cognitive requirements required to ▪ plan a travel route ▪ inspect the operating condition of a tractor and/or trailer ▪ monitor and adjust to complex driving situation ▪ maneuver through crowded areas ▪ quickly alter the course of a vehicle to avoid trouble	5.	N/A
B. Work Environment		
1. Describe		
a. adverse health effects associated with rotating work schedules and irregular sleep patterns	6.	N/A
b. long-term effects of fatigue associated with extended work hours without breaks	7.	N/A
2. Anticipate risk factors associated with common dietary choices available to drivers	8.	N/A
3. Cite stressors likely associated with extended time away from a driver's social support system	9.	N/A
4. Anticipate long-term health effects of stress from ▪ tight pickup and delivery schedules ▪ irregular work, rest, and eating patterns ▪ adverse road, weather, and traffic conditions ▪ exposure to temperature extremes, vibration, and noise ▪ transporting passengers or hazardous products	10.	N/A
II. DRIVER'S MEDICAL INFORMATION		
A. History		
1. Identify issues in a driver's medical record including		
a. pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	11.	ALL[b]
b. pulmonary diseases (e.g., emphysema, asthma, carcinoma, tuberculosis, bronchitis, or sleep apnea)	12.	ALL[b]
c. cardiac symptoms (e.g., syncope, dyspnea, or collapse; murmurs or arrhythmias)	13.	ALL[b]
d. cardiovascular diseases (e.g., congestive heart failure, myocardial infarction, coronary insufficiency, hypertension, or thrombosis)	14.	ALL[b]
e. neurologic disorders (e.g., loss of consciousness, seizures, or antiseizure medications)	15.	ALL[b]
f. disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, or macular degeneration)	16.	ALL[b]
g. motor disorders (e.g., rheumatic, arthritic, or neuromuscular disorders)	17.	ALL[b]
h. diabetes	18.	ALL[b]
i. kidney disorders	19.	ALL[b]
j. liver diseases	20.	ALL[b]
2. Identify past procedures in the medical record including		ALL[b]
a. coronary artery bypass, pacemaker or defibrillator implantation	21.	ALL[b]
b. amputation and orthotic fitting	22.	ALL[b]
c. anticoagulation therapy for thrombosis	23.	ALL[b]
d. oncology treatments	24.	ALL[b]
3. Query a driver		

a. about prescription and over-the-counter medications he or she is taking for a medical condition	25.	ALL
b. about his or her use of		
1) nicotine products (e.g., cigarettes, chewing tobacco)	26.	ALL
2) alcohol (e.g., beer, wine, liquor)	27.	ALL
3) other drugs	28.	ALL
c. about any history of		
1) digestive problems/disorders	29.	ALL
2) hearing disorders	30.	ALL
3) loss of balance	31.	ALL
4) nervous/psychiatric disorders	32.	ALL
d. about findings that could indicate cardiac risk factors including ▪ chest pain ▪ dyspnea ▪ orthopnea ▪ dizziness ▪ palpitations ▪ hypercholesterolemia ▪ family history of heart disease ▪ previous heart transplant	33.	ALL
e. about findings that could indicate pulmonary risk factors including ▪ dyspnea ▪ orthopnea ▪ chronic cough ▪ wheezing ▪ asthma	34.	ALL
f. about findings that could indicate neurological disorders ▪ head/brain injuries, disorders, or illnesses ▪ seizures or epilepsy ▪ loss of/altered consciousness ▪ fainting/dizziness ▪ stroke ▪ paralysis ▪ spinal injury or disease	35.	ALL
g. about findings that could indicate a musculoskeletal disorder ▪ muscular disease ▪ missing/impaired limbs ▪ spinal injury/disease ▪ chronic low back pain	36.	ALL
h. about findings that could indicate a sleep disorder including ▪ daytime somnolence ▪ snoring while asleep ▪ cramping, restless legs while asleep ▪ gasping or choking awakenings ▪ headache on awakening	37.	ALL
i. who has diabetes regarding		
1) hypoglycemic symptoms	38.	ALL

2) his or her last glycohemoglobin value	39.	ALL
3) the frequency of insulin reactions over the last year	40.	ALL
4) glucose monitoring and self-care practices	41.	ALL
4. Review information for a driver who was qualified under a limited exemption for diabetes including		
a. blood glucose monitoring logs	42.	ALL
b. an endocrinologist's report	43.	ALL
B. Physical Examination		
1. Verify the identity of the driver with a photo identification	44.	ALL
2. Observe whether a driver is overweight or underweight for his/her height	45.	ALL
3. Examine the driver's eyes		
a. assess for		
1) reactivity to light and pupillary equality	46.	ALL
2) evidence of nystagmus and exophthalmos	47.	ALL
b. measure visual parameters including acuity, horizontal field of vision, and color recognition	48.	ALL[c]
c. evaluate the mobility of each eye	49.	ALL
d. perform a fundoscopic examination when retinal disease is likely	50.	N/A
4. Examine the driver's ears		
a. inspect the ear canal and tympanic membrane	51.	ALL
b. screen for hearing abnormalities with a forced whisper test	52.	ALL[d, e]
c. conduct audiometric measurements as indicated	53.	ALL
5. Examine the driver's mouth and throat for conditions that may interfere with breathing, speaking, or swallowing	54.	ALL
6. Examine the driver's neck for sufficient mobility to observe gauges and safely operate the vehicle he/she drives	55.	ALL
7. Examine the driver's heart		
a. inspect the chest for surgical scars that may reveal a history of a cardiac disorder	56.	ALL
b. palpate and auscultate over the heart for thrills and murmurs	57.	ALL
c. note heart rate and blood pressure	58.	ALL
d. observe for signs of disease including ▪ irregular pulse ▪ distended neck veins ▪ peripheral edema ▪ abnormal heart sounds ▪ shortness of breath ▪ fatigue ▪ fluid retention ▪ carotid bruits ▪ arterial bruits	59.	ALL
8. Examine the driver's lungs by inspection and auscultation, and note		
a. respiratory rate and pattern	60.	ALL
b. abnormal breath sounds	61.	ALL
c. abnormal chest wall configuration	62.	ALL
d. evidence of cyanosis	63.	ALL
9. Examine the driver's abdomen and viscera, and note		

a. an enlarged liver or spleen	64.	ALL
b. abnormal masses or bruits	65.	ALL
c. hernias or tenderness along the abdominal wall	66.	ALL
10. Examine the driver's spine		
a. inspect for surgical scars and deformities	67.	ALL
b. note loss in range of motion and painful motion	68.	ALL
c. observe for kyphosis or other spinal deformities that could limit pulmonary function	69.	ALL
11. Examine the driver's hands, arms, feet, and legs		
a. note		
1) loss or impairment	70.	ALL
2) deformities, atrophy, paralysis, or clubbing	71.	ALL[f]
b. inspect the driver's lower extremities for varicosities, skin abnormalities, and edema	72.	ALL
c. evaluate		
1) shoulder mobility relative to cab entry and exit requirements	73.	ALL
2) handgrip relative to requirements for controlling a steering wheel and gear shift as well as responsibilities to secure and handle freight	74.	2,5,7,8,10
3) power generated by wrist and finger flexion	75.	2,5,7,8,10
4) precision and power grasp prehension for a driver who has lost or suffered impairment of an extremity	76.	N/A
5) the ability of a driver to sustain a grip on the steering wheel during routine and emergency driving conditions	77.	2,5,7,8,10
12. Observe		
a. whether a driver appears to be malnourished perhaps as a result of an eating disorder	78.	ALL
b. a driver's gait, mobility, and posture while bearing his or her weight and note limping or signs of pain	79.	ALL
c. while a driver bends at the waist, shrugs both shoulders, and raises both hands above his or her head	80.	ALL[g]
d. while a driver pronates and supinates both hands	81.	2,3,4,5,6, 7,8,9,10
e. while a driver flexes, inverts, and abducts both feet and ankles	82.	2,3,4,5,6, 7,8,9,10
13. Examine the driver's neurological and mental status		
a. assess		
1) pupillary reactions and extraoccular movements	83.	ALL
2) appearance of tympanic membranes and middle ear	84.	ALL
3) equilibrium and coordination findings	85.	ALL
4) sensory or positional abnormalities	86.	ALL
5) reflex responses and ataxia	87.	ALL
b. communicate with the driver to screen and evaluate	88.	
1) sufficiency of language and speech skills relative to job responsibilities	89.	ALL
2) comprehension and interaction	90.	ALL

3) for cognitive impairment (e.g., orientation, intellect, memory)	91.	ALL
4) for signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	92.	ALL
14. Assess for		
a. sleep disorders when weight, blood pressure, and neck size measurements indicate risk	93.	ALL
b. neurologic disorders by observing for tremor, finger-to-nose test, and balance	94.	ALL
C. Diagnostic Tests and Referrals		
1. Solicit the driver's approval to obtain additional information through testing or referral to a specialist	95.	N/A
2. Identify the driver's third-party-payer prior to collecting additional information	96.	N/A
3. Administer urinalysis testing		
a. order a urinalysis including tests for specific gravity, protein, blood, and glucose	97.	ALL
b. advise a driver regarding the minimum sample volume to conduct required urinalysis testing	98.	ALL
c. describe the appropriate sequence for collecting urine specimens when a motor carrier sends a potential driver for a pre-employment medical examination and controlled substances test	99.	ALL
4. Refer a driver for additional testing as indicated and approved by a driver's motor carrier including		
a. audiometrics	100.	N/A
b. an electrocardiogram	101.	N/A
c. a chest radiograph	102.	N/A
d. pulmonary function tests (e.g., spirometry, diffusion, lung volumes)	103.	N/A
e. an oximetry or arterial blood gas analysis with or without exercise	104.	N/A
f. a polysomnographic, sleep latency, and/or maintenance-of-wakefulness study	105.	N/A
g. a cardiac stress test	106.	N/A
h. a lipid profile	107.	N/A
i. a drug toxicology screen	108.	N/A
j. a creatinine and potassium study	109.	N/A
k. vascular studies	110.	N/A

5. Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist ▪ cardiac (e.g., myocardial infarction, coronary insufficiency) ▪ pulmonary (e.g., emphysema, fibrosis) ▪ sleep (e.g., obstructive sleep apnea) ▪ vision (e.g., retinopathy, macular degeneration) ▪ motor (e.g., arthritis, neuromuscular disease) ▪ endocrine (e.g., diabetes) ▪ neurologic (e.g., seizures) ▪ mental health (e.g., depression, schizophrenia)	111.	N/A
6. Evaluate drug toxicology screening results when available and order a second more specific test as indicated	112.	N/A
7. Screen drivers with a hypertension diagnosis for target-organ damage including heart failure, stroke, retinopathy, and nephropathy	113.	N/A
8. Refer a driver with limitations in extremity movement for an on-road performance evaluation	114.	N/A
D. Documentation		
1. Comment about each affirmatively marked health history item on medical examination report regarding a driver's ability to operate a commercial motor vehicle	115.	ALL
2. Cite		
a. statements from a motor carrier who evaluated a driver's performance of driving and non-driving job tasks	116.	N/A
b. an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision waiver study program	117.	N/A
3. Evaluate medications a driver is taking to potentially identify a disqualifying medical condition	118.	ALL
4. Record		
a. vision measurements in Snellen comparable values	119.	ALL
b. audiometric results in ANSI standard units	120.	ALL
5. Record whether a driver's		
a. vision performance qualifies only when wearing corrective lenses	121.	ALL
b. hearing performance qualifies only when wearing a hearing aid	122.	ALL
6. Record drug toxicology screening results when available	123.	ALL
7. Integrate test results as available with other information about the driver including		
a. urinalysis (e.g., specific gravity, protein, blood, and glucose)	124.	ALL
b. blood (e.g., creatinine, electrolytes, toxicology, lipids)	125.	ALL
c. audiometrics	126.	ALL
d. electrocardiogram	127.	10
e. chest radiograph	128.	NONE[h]
f. pulmonary function test	129.	NONE[h]
g. oximetry or arterial blood gas analysis	130.	NONE[h]
h. cardiac stress test	131.	NONE[h]
i. vascular study	132.	NONE[h]

8. Integrate a specialist's evaluation with other information about the driver	133.	N/A
9. Cite findings from medical specialists supporting a driver's qualifications under a limited exemption for diabetes or vision	134.	N/A
10. Explain how and why a physical impairment interferes with a driver's ability to perform normal tasks associated with the operation of a commercial motor vehicle	135.	ALL
11. Compare a driver's limitations to job requirements including		
a. spine movement	136.	ALL
b. abdominal disorders including hernias	137.	1,2,3,4,6, 7,8,9,10
12. Describe circumstances related to a driver's qualifications when the driver has a physical condition that may otherwise disqualify him/her including a		
a. prosthetic/orthotic device used during driving	138.	ALL
b. road test of driving skills	139.	ALL
13. Summarize each diagnosis, onset date, medications and current limitations for the driver's medical record	140.	ALL
14. Evaluate the nature and severity of diagnosed conditions including the degree of limitation, likelihood of progression, and potential for sudden incapacitation for rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disorders	141.	ALL
15. Explain reasons		
a. supporting a driver certification decision when published FMCSA medical guidelines indicate disqualification (e.g., practice standards have changed since guidelines were published)	142.	ALL
b. a driver was only certified for intrastate work and appropriately mark a driver's medical examination report	143.	ALL
III. MEDICAL CERTIFICATION OUTCOMES		
A. Counseling		
1. Emphasize to a driver who is taking medications he/she should comprehend warning labels associated with those medications	144.	ALL
2. Impress on a driver who requires medication and/or treatment the importance of complying with the care plan	145.	ALL
3. Advise a driver regarding		
a. side effects and interactions of medications, including those acquired over the counter, that could negatively affect his/her driving	146.	ALL
b. use of cough medications that contain narcotics relative to driving responsibilities and random drug testing	147.	ALL
c. potential interactions of anticoagulant medications with other medications and diet, and the risk of bleeding if traumatized	148.	ALL
4. Advise a driver candidate who		
a. has experienced a seizure attributed to a non-epileptic cause to defer certification until a complete recovery can be verified	149.	N/A
b. just began taking anticoagulant medication to stabilize for at least 3 months before seeking medical certification	150.	N/A

c. had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	151.	N/A
d. was treated for obstructive sleep apnea to delay medical qualification for a month and establish a compliance pattern with the treatment plan	152.	N/A
e. has asthma about potential irritants in the work environment that could exacerbate the condition	153.	N/A
f. has diabetes about glucose monitoring frequencies and the minimum threshold while driving	154.	N/A
5. Administer Skill Performance Evaluation (SPE) cases		
a. advise a driver who		
1) lost a foot, leg, hand, or arm, but otherwise could be qualified to drive, about the SPE application process	155.	N/A
2) qualifies with an SPE certificate to retain a copy while on duty	156.	N/A
b. advise a motor carrier of its responsibilities to evaluate a driver on equipment the driver typically uses	157.	N/A
6. Explain to a driver the way fatigue, lack of sleep, undesirable diet, emotional conditions and stress while driving, and other illnesses can compound diabetes	158.	ALL
7. Emphasize to a driver who qualifies		
a. with a hearing aid he/she should possess a spare power source for the device	159.	N/A
b. under a limited exemption for diabetes, he/she should		
1) possess a rapidly absorbable form of glucose while driving	160.	N/A
2) self-monitor blood glucose one-hour before driving and at least once every four hours while driving	161.	N/A
3) plan to submit glucose monitoring logs for each annual recertification	162.	N/A
B. Risk Assessment in Borderline Cases		
1. Judge for what duration a documented medical condition will likely remain stable	163.	ALL
2. Evaluate the likely rate of progress for a documented neurological limitation and likelihood of sudden incapacitation	164.	ALL
3. Compare a driver's blood pressure to Stage 1, 2, and 3 hypertension guidelines for guidance regarding the recertification interval	165.	ALL
4. Evaluate results of		
a. resting and stress electrocardiograms from a driver recovering from an acute cardiovascular event	166.	N/A
b. ejection fraction measurements for a driver with cardiovascular disease	167.	N/A
c. a complete neurological examination for a driver with a history of seizures who seeks reinstatement	168.	N/A
5. Confirm for a driver who had a cardiovascular insufficiency event		
a. a normal resting and stress electrocardiogram	169.	N/A
b. lack of residual complications or physical limitations	170.	N/A

c. safe driving is still likely in spite of side effects and interactions of medications he or she must take	171.	N/A
6. Confirm a driver who has asthma complies with the care and monitoring plan and has the disease under adequate control	172.	N/A
7. Relate a history of atrial fibrillation/flutter, stroke, and use of an anticoagulant to the risk of sudden incapacitation	173.	N/A
8. Integrate medical findings for a driver qualified under a limited exemption for diabetes or vision	174.	N/A
9. Evaluate INR monitoring results for a driver who regularly takes an anticoagulant medication	175.	N/A
10. Determine whether a driver candidate with a history of an epileptic seizure also had a sufficiently long seizure-free history to support certification	176.	N/A
11. Administer limited exemptions for drivers seeking certification in intra-city zones	177.	N/A
12. Administer Skill Performance Evaluation (SPE) cases		
a. identify terms, conditions, and limitations set forth in a driver's SPE Certificate	178.	N/A
b. ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	179.	N/A
13. Verify whether a driver with diabetes, who relies only on an oral hypoglycemic drug or diet and exercise, has the disease under control	180.	ALL
14. Confirm a driver who uses a Schedule 1 drug received a prescription from a licensed medical practitioner along with advice relative to side effects on his/her ability to drive	181.	N/A
15. Evaluate a driver's		
a. functional reserve and risk of arrhythmias when he/she has a diagnosis of coronary artery disease	182.	N/A
b. ejection fraction by echocardiogram after a driver had a myocardial infarction	183.	N/A
16. Confirm a driver who was medically unqualified to drive due to		
a. Alcoholism has completed counseling and treatment to the point of full recovery	184.	N/A
b. Prohibited drug use shows evidence he/she is now free from such use	185.	N/A
C. Disqualification Factors and Outcomes		
1. Summarize absolute certification standards for which no medical examiner discretion is allowed	186.	ALL
2. Establish when any of the following parameters for a driver fall below minimum corrected vision standards ▪ acuity ▪ peripheral field of view ▪ color identification	187.	ALL[i]
3. Establish when hearing measurements with or without a hearing aid fall below minimum standards	188.	ALL
4. Establish when		
a. a driver has diabetes requiring insulin control	189.	ALL
b. the medical history indicates a diagnosis of epilepsy	190.	ALL

c. a driver is dependent on a Schedule 1 substance including a narcotic, amphetamine, or other habit-forming drug	191.	ALL
d. a driver's asthma symptoms are inadequately controlled	192.	ALL
5. Establish clear evidence of emotional instability including documented diagnoses of schizophrenia, psychoses, paranoia, or neuroses	193.	ALL
6. Cite side effects and interactions of medications required to control mental disorders relative to cognitive demands of driving	194.	ALL
7. Evaluate evidence from specialists and testing that could disqualify a driver including		
a. hypoxemia or cough syncope associated with acute and chronic pulmonary diseases	195.	ALL
b. deep vein thrombosis and pulmonary emboli	196.	ALL
c. signs and symptoms of cardiac disorders	197.	ALL
d. a sufficiently large abdominal aneurysm	198.	ALL
e. anticoagulant use and cerebrovascular disease or advanced age	199.	ALL
f. signs of alcoholism	200.	ALL
g. neurologic disorders (e.g., dementia, aphasia, vertigo, stroke, tumors, Parkinson's, epilepsy, traumatic CNS injuries)	201.	ALL
h. neuromuscular diseases (e.g., motor neuron disease, muscular dystrophy, multiple sclerosis)	202.	ALL
i. endocrine disorders	203.	ALL
8. Disqualify a driver for medical reasons from any commercial motor vehicle driving		
a. advise a driver of the reasons for a disqualification decision	204.	ALL
b. state whether and how reinstatement could be possible	205.	ALL
c. refer a driver with a controllable condition to a specialist for consultation and treatment	206.	ALL
D. Certification Intervals and Outcomes		
1. Limit a driver to intrastate commercial motor vehicle driving	207.	N/A
2. Certify a driver for an interval appropriate to risks associated with his or her medical information	208.	ALL[j]
3. Certify a driver with or without restrictions appropriate to his or her medical information including ▪ wearing corrective lenses ▪ wearing a hearing aid ▪ accompanied by a waiver or exemption, which the medical examiner identifies ▪ accompanied by a Skill Performance Evaluation Certificate	209.	ALL
4. Advise a driver qualified		
a. under a limited exemption for diabetes or vision to plan for annual medical recertification	210.	N/A
b. while taking anticoagulant medication to plan for annual medical recertification	211.	N/A
c. without limitations or restrictions to seek recertification in two years	212.	ALL[j]

5. Sign the driver's medical examination report and ensure the form includes the examiner's name, examination date, office address, and telephone number	213.	ALL

Comments

[a] N/A indicates tasks that were not directly observed in any of the observations, but medical examiners may still perform them when necessary

[b] If applicable (not all medical examiners have access to medical records)

[c] All medical examiners measured acuity; others varied based upon the organization's demands (i.e., some organizations require a peripheral and/or color vision test, others do not)

[d] Medical examiner 5 performed a hearing test by snapping fingers behind the driver's head

[e] Medical examiners 2 and 9 performed a hearing test using an audiogram machine rather than a forced whisper test

[f] Medical examiners 6 and 10 had the drivers remove socks during the examination

[g] Every examiner did at least one of these, but not everyone did all three

[h] Medical examiners performed the interpretation of the results, but not the test itself

[i] All observed medical examiners performed at least one of these tests

[j] Medical examiners indicated in post-examination interviews that they perform these tasks when necessary

REGIONAL BRAINSTORMING SESSIONS

Medical examiners representing: (1) advanced practice nurses, (2) chiropractors, (3) doctors of osteopathy, (4) medical doctors, and (5) physician assistants were convened during three regional meetings. Brainstorming sessions were conducted in Chicago, Illinois; Falls Church, Virginia; and San Francisco, California. At the same time that they communicated the need for direct observation participants, study staff circulated the need for regional brainstorming participants through the medical examiner community. Each of the regional brainstorming sessions included at least 14 volunteer members, generally three from each profession, with alternates welcomed from any of the professions. Table 4 lists medical examiners who participated in each session.

Study staff used the first two sessions to review as much of the task list as possible. Attendees in Session 1 started at the beginning of the task list, but did not have time to address all items. Session 2 attendees started at the point at which the first group left off; in the afternoon portion of their session, they revisited earlier parts of the task list. Each group made recommendations about the structure of the task list outline. These groups also suggested task additions, deletions, and revisions based on their collective expertise in conducting CMV driver physical examinations. Attendees in Session 3, held in San Francisco, California, focused on the development of potential demographic questions for the Role Delineation Study survey.

Each group: (1) drafted a short definition of the FMCSA medical examiner and (2) recommended potential task rating scales for the survey in order to produce data for the WIPT to use in the objective determination of task criticality. The majority of participants agreed that a scale focusing solely on the importance of each task, excluding the frequency with which a task was performed in a typical work week, was the most appropriate option. This recommendation was made because, though some tasks are not performed frequently, when they are performed, it is critical for a medical examiner to behave competently. The group that convened in Virginia recommended the consideration of a second scale to supplement the importance scale, so that medical examiners could rate the risk to the public if a task is incompetently performed.

Ultimately, the WIPT decided to use one scale—the importance scale—to simplify the job of completing the survey and encourage medical examiners to respond. However, they did construct the rating scale description so that medical examiners would consider public risk while choosing an importance rating for each task.

Table 4
List of Participants in Regional Brainstorming Meetings

Region	Subject Matter Expert	License	State
Midwestern	Anderson, Connie	Physician Assistant	Nebraska
	Ausfahl, Jim	Medical Doctor	Illinois
	Baltrusaitis, Al	Doctor of Osteopathy	Wisconsin
	Bergin, Jeffrey	Chiropractor	Illinois
	Goldberg, Richard	Medical Doctor	Illinois
	Jurisic, Maja	Medical Doctor	Wisconsin
	Nesbitt, Richard	Physician Assistant	Wisconsin
	Papendick, Robbin	Doctor of Osteopathy	Wisconsin
	Pitsch, Ellen	Advanced Practice Nurse	Wisconsin
	Smith, Clinton	Chiropractor	Illinois
	Wagner, Karl	Physician Assistant	Michigan
	Weaver, William D.	Doctor of Osteopathy	Illinois
	Wilburn, Lolita	Chiropractor	Illinois
	Williams, Leah	Advanced Practice Nurse	Michigan
Eastern	Albanowski, Susan R.	Physician Assistant	Virginia
	Brubaker, Chrissy	Advanced Practice Nurse	Virginia
	Dietzler, Roxanne	Doctor of Osteopathy	Virginia
	Gamerman, Marc	Chiropractor	Maryland
	Heaton, Joseph	Doctor of Osteopathy	Virginia
	Heaton, Roy	Doctor of Osteopathy	Virginia
	Jimenez, Daniel	Medical Doctor	Virginia
	Kohlhepp, William C.	Physician Assistant	Connecticut
	Maples, Irene	Physician Assistant	Virginia
	Megehee, Michael John	Chiropractor	Oregon
	Olive, Darlene W.	Advanced Practice Nurse	Virginia
	Ross, James	Medical Doctor	Virginia
	Sadula, Duane	Chiropractor	Maryland
	Seidel, Edward	Medical Doctor	Maryland
	Wilson, Ted	Physician Assistant	Maryland
Western	Collier, Blake	Physician Assistant	California
	Gage-Kelly, Lina	Advanced Practice Nurse	California
	Grant, Ronald (Greg)	Physician Assistant	California
	Hopp, Patricia	Advanced Practice Nurse	California
	Horn, Karen	Advanced Practice Nurse	California
	Hudson, Warner	Medical Doctor	California
	Janda, Gerald	Chiropractor	California
	Kaye, David	Doctor of Osteopathy	California
	Jourgensen, David R.	Medical Doctor	California
	Lee, Donald	Doctor of Osteopathy	California
	Lollar,Lester (Lance)	Chiropractor	California
	Pocekay, Dennis	Medical Doctor	California
	Ringer, Don	Chiropractor	California
	Rush, Karen	Physician Assistant	California
	Walker, Kent	Doctor of Osteopathy	Oregon
	Wiscomb, Ken	Physician Assistant	Washington

Forty-five medical examiners from 10 states participated in these sessions.

TASK LIST DEVELOPMENT AND REVISIONS

At this point in the process, the following milestones had been met:

- AMP staff reviewed the available literature describing the medical examiner role.
- Direct observations of 10 medical examiners reinforced some competency expectations identified through the literature review and revealed new expectations for medical examiners.
- AMP staff synthesized these formative inputs into the draft task list in Table 3.
- Regional brainstorming session participants provided input on potential tasks and provided recommendations to be considered by WIPT members as they developed a survey for the Role Delineation Study. Appendix A reflects these recommendations, made to the WIPT members who would ultimately reorganize the task list.

WORKING INTEGRATED PRODUCT TEAM SURVEY DEVELOPMENT

Using recommendations from the three regional brainstorming sessions, the WIPT developed a nearly final set of task statements intended to cover all content domains (i.e., overarching categories within which specific medical examiner tasks are grouped) and an "FMCSA medical examiner" definition to guide medical examiners and give context to their task ratings. The WIPT also created a background information section for survey respondents to complete, intended to help the WIPT understand demographic characteristics of the sample and evaluate how well survey responses represented the overall medical examiner population.

A group of 134 medical examiners reviewed a draft of the nearly final survey. WIPT members made final changes to the survey based on reactions from this group. The final version of the survey is shown in Appendix B. It includes:

- A cover letter describing the purpose of the study and the potential respondent's role.
- Pages 1 – 2, providing instructions for completing the survey, describing the scale respondents would use to rate task importance, and defining an FMCSA medical examiner.
- Pages 3 – 8, including the task list, which was divided into an outline of content domains.
- Page 9, giving respondents an opportunity to assess the adequacy of the task list and encouraging them to express how they would comparatively weight content areas in a certification test.
  Notes:
  - Task list adequacy responses were expected to help the WIPT assess the thoroughness of the task list in describing the medical examiner role. The list was thorough to ensure that competency assessments were comprehensive.
  - Responses to the question asking medical examiners to weight the content domains were expected to guide the WIPT in their decisions to specify or allocate test items to each content domain.

- Pages 10 – 12, giving respondents an opportunity to provide information about their backgrounds.
  Notes:
  - Demographic information was expected to serve the WIPT in assessing whether the sample of survey respondents represented subgroups in the medical examiner population.
  - However, this population was not well known, since medical examiners have no unifying organization and have not been studied as a group before.

Study staff included a postage-paid return envelope in the survey packet in an effort to encourage survey responses.

SAMPLE SELECTION

Medical examiners came from five different professional backgrounds that did not typically interact. Organizations with which medical examiners were affiliated tended to be limited to nurses, physicians, chiropractors, and physician assistants. No organization unified medical examiners into one group who trained or received continuing education together. Therefore, this was a hidden population.

Axiom staff worked to identify members of this hidden population by word-of-mouth and direct mail efforts. Organizations listed below assisted Axiom staff in finding medical examiners among their members:

- Alaska Academy of Physician Assistants
- American Academy of Family Physicians
- American Academy of Nurse Practitioners
- American Academy of Physician Assistants
- American Academy of Physician Assistants in Occupational Medicine
- American Association of Occupational Health Nurses
- American Chiropractic Association
- American Chiropractic Association Council on Occupational Health
- American College of Nurse Practitioners
- American College of Occupational and Environmental Medicine
- American Nurse Credentialing Center
- American Osteopathic Association
- American Osteopathic College of Occupational and Preventive Medicine
- California State Association of Occupational Health Nurses, Inc.
- Federation of Chiropractic Licensing Boards
- OccuMedix, Inc.
- Osteopathic Physicians & Surgeons of California
- University of California, San Francisco
- University of Illinois at Chicago, Great Lakes Center for Environmental and Occupational Health and Safety
- Virginia Osteopathic Medical Association
- Virginia State Association of Occupational Health Nurses
- Washington Occupational Health Associates
- Washington State Nurses Association

Axiom staff contacted major transportation companies to obtain lists of their occupational health providers. Mailings were sent to non-occupational health practices—such as family practice, general medicine, internal medicine, urgent care, and sports medicine—in an effort to further identify hidden groups of healthcare professionals performing FMCSA physical examinations as a part of their practice. As Axiom staff made contacts with medical examiners, they developed a listserv to facilitate rapid communications with the group of medical examiners who had agreed to participate in the Role Delineation Study. They encouraged medical examiners on the listserv to recruit other practitioners conducting CMV driver physical examinations. Axiom staff also distributed an opt-in postcard, shown in Appendix C, to select groups to increase numbers of respondents in some of the professional subgroups. Names and addresses were gathered through all of these processes to create the final sample of 4,082 participants who would be asked to submit anonymous survey responses.

Throughout the Role Delineation Study, study staff took several steps to encourage a high response rate. Those who were interested in participating in the survey were able to opt in to study participation by replying to a postcard solicitation. Axiom staff compiled a mailing list from these responses. The purpose of the opt-in postcard mailing was to ensure that surveys were only sent to individuals who had already shown interest in participating. In addition, study staff sent a second postcard to all individuals on the list alerting them to the upcoming survey mailing.

As another measure designed to increase the survey response rate, study staff sent a follow-up letter to individuals on the mailing list. The follow-up letter reminded participants of the survey deadline and encouraged those who had misplaced the survey to contact AMP to request another. The follow-up letter also included a short survey that consisted only of the demographic questions included in the full survey. Researchers compared responses obtained from the follow-up survey to responses to identical questions contained in the full survey. Staff sent surveys along with a postage-paid return envelope addressed to AMP so that respondents would not have to pay for postage. Both postcards and the follow-up survey can be found in Appendix C.

In addition to the follow-up letter mailed to participants, study staff sent email reminders to individuals on the mailing list through the listserv. These email reminders also encouraged individuals to complete their surveys and mail them back before the due date or to contact AMP if they had either not received or misplaced their surveys. Study personnel extended the original survey deadline by 2 weeks to allow more participants to complete and mail their surveys back in time to be included in the data analysis.

AMP resent a total of 417 surveys by request to individuals who had incorrect addresses or had misplaced their original surveys. These individuals contacted AMP or Axiom staff in response to the follow-up letter and reminder emails. Study staff corrected addresses and resent surveys as necessary to ensure that participants had as much time as possible to return a completed survey in time for data analysis. A summary of the number of additional surveys mailed and dates on which surveys were resent to participants appears in Table 5.

Table 5
Resent Survey Log

Date	Surveys
01/02/2007	2
01/04/2007	7
01/08/2007	1
01/12/2007	1
01/18/2007	103
01/19/2007	16
01/22/2007	16
01/24/2007	9
01/25/2007	5
01/26/2007	10
01/30/2007	17
02/01/2007	4
02/05/2007	30
02/13/2007	109
02/15/2007	5
02/20/2007	20
02/23/2007	42
02/26/2007	20
Total	417

RESULTS

RETURNED SURVEYS

Respondents completed and returned a total of 2,297 full surveys. Ten individuals contacted AMP and indicated they were either no longer interested or not qualified to participate in the Role Delineation Study. A total of 22 surveys were returned as undeliverable because of inaccurate postal addresses. Therefore, the final response rate for the Role Delineation Study survey was 56.7% [2,297 completed surveys/(4,082 mailed surveys – 32 undeliverable surveys or active decliners)].

Appendix D summarizes the sample characteristics from the background information provided by survey respondents. These results are graphically represented in figures within the Demographic Analyses section.

An additional 891 responses were collected from the follow-up survey. Responses to the follow-up survey are presented in Appendix E. A total of 3,188 responses (2,297 from the full survey and 891 from the follow-up survey) were obtained from the sample. The total combined response rate for both surveys was 78.7%. However, because these surveys were anonymous, it is possible that some medical examiners completed both full- and follow-up surveys, so the combined response rate may be an overestimate.

The WIPT intended to use mean importance ratings as a task selection criterion as long as it determined the sample to be sufficient after evaluating the demographic characteristics. Therefore, it was vital to know the accuracy of the task responses from this sample in representing population responses. Fink (1995) instructed that as sample size increases, error in observed responses decreases. Research staff presented Figure 1 to the WIPT to facilitate evaluation of potential error attributable to sample size in task responses.

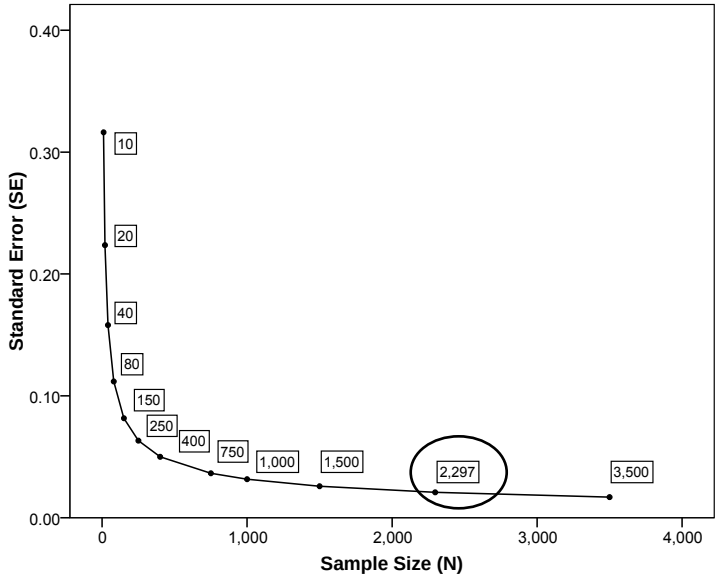

Figure 1. Relationship Between Sample Size and Error.

Figure 1 isolates the portion of error found in sample responses that can be attributed to sample size. The curve represents the function

$$SE = \frac{1}{\sqrt{N}}$$

where *N* is the sample size and *SE* is the standard error associated with that sample. The standard deviation (*SD*) of task ratings also influences error in sample means. As task ratings become more variable, one observes more error. Estimates for the standard error of the mean (SE_{Mean}) were calculated for all task ratings. Task SE_{Mean} values are shown in Appendices F through S. They were calculated by substituting *S*D for 1 in Formula 1, such that

$$SE_{Mean} = \frac{SD}{\sqrt{N}}$$

The relationship displayed in Figure 1 between sample size and error in observed task ratings is such that error rapidly declines up to a point as the size of a sample grows. Beyond that point, additional cases continue to shrink error, but the effect diminishes. Figure 1 shows that the size associated with the role delineation sample was far beyond the inflection point or bend in the curve—much larger than would be required to minimize error in task ratings. As a result, the WIPT expected task ratings to reflect the population of medical examiners accurately.

TASK RATING RELIABILITIES

Because decisions to retain or remove tasks relied on task ratings from a sample of medical examiners, the WIPT also assessed the precision of the importance ratings. Reliability estimates for task and respondent importance ratings for each content domain are shown in Table 6. The maximum reliability coefficient value equals 1.00. However, AMP staff advised WIPT members that values approaching or exceeding 0.90 indicated very high consistency from a practical point of view.

AMP calculated intraclass correlation values (Guilford, 1956; Kirk, 1982) to measure how similarly respondents rated tasks in each content domain. All intraclass correlation values were near the maximum, which indicated a strong degree of task rating agreement among raters for each content domain. This evidence indicates it is highly likely that other samples from the population would produce similar importance ratings. Therefore, the WIPT members' confidence was high in using these task ratings as guides for subsequent task criticality decisions.

AMP also calculated coefficient alpha values (Hopkins, Stanley & Hopkins, 1990) to measure how consistently respondents rated tasks within each content domain. As shown in Table 7, coefficient alpha values tended to be high for each content area, so the WIPT found these tasks to be logically grouped in the task list. The plan was for the WIPT to specify the number of items for the certification test according to the domains described in the content outline. Finding that medical examiners reacted similarly to tasks within each content domain reinforced the plan for the WIPT to use the outline as the basis for test-specification development.

Table 6
Reliability Estimates for Task and Respondent Importance Ratings

		Reliability (Consistency)		
Content Area	# of Respondents	Between Respondents ***Intraclass***	Between Tasks ***Coefficient Alpha***	# of Tasks
I.A. Identification and History	1,960	.999	.939	30
I.B. Physical Examination and Evaluation	1,555	.998	.977	51
I.C. Diagnostic Tests and/or Referrals	1,276	.998	.899	11
I.D. Documentation of Ancillary Information	1,106	.997	.937	16
II.A. Health Education Counseling	1,578	.996	.928	12
II.B. Risk Assessment	1,262	.996	.932	12
II.C. Certification Outcomes and Intervals	1,856	.990	.892	14

TASK LIST ADEQUACY

A critical element of a role delineation study is that the task list reflects a thorough description of competent behavior. There should be no gaps in the competencies described by the tasks in the list. Otherwise, there is a risk of leaving out potentially critical content necessary to protect the public from incompetent medical examiners.

The survey prompted respondents, immediately upon reaching the end of the task list, to assess its adequacy as a thorough descriptor of competencies. It did so by asking, "How well did this survey cover critical tasks for the role of an FMCSA medical examiner?"

Forty-nine respondents chose not to answer this question. Of the 2,249 medical examiners who did respond, 95.8% selected the "adequate" response. Therefore, the adequacy of the task list in thoroughly covering the content domain was strongly supported by respondents, providing more evidence that the tasks identified by this study as critical included most or all job dimensions associated with competent practice. The WIPT members' confidence in the plan to use ratings from this sample to assess criticality of individual tasks was further supported by this outcome.

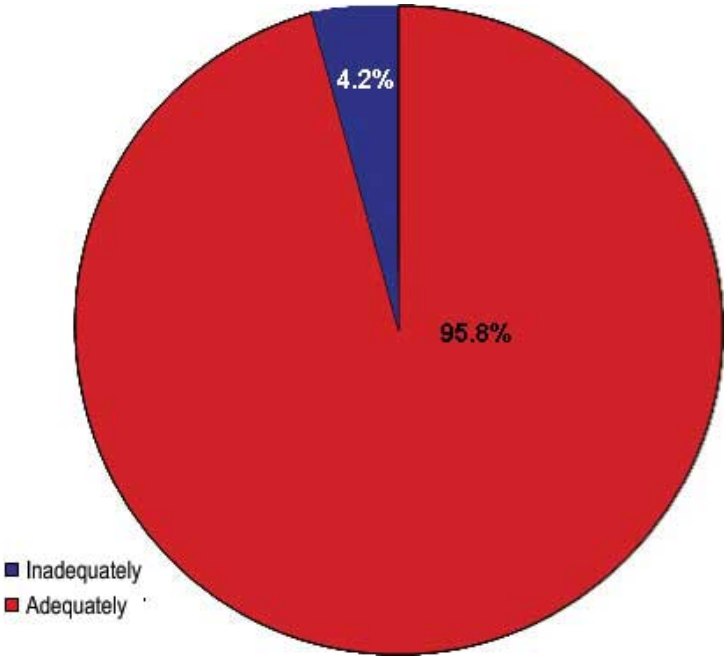

Figure 2. Task List Adequacy. *n*=2,249

DEMOGRAPHIC ANALYSES

Responses to questions in the background information section of the survey helped describe the characteristics of the sample. WIPT members reviewed responses to the background questions shown in Appendix C and evaluated whether the sample was sufficiently representative to use available task importance data when making decisions to retain or exclude tasks from certification test content. AMP staff advised WIPT members to try to detect potentially biased results by comparing background information results to their understanding about the population, limited though this understanding was by the population's largely hidden nature.

A narrative description of sample characteristics included the following:

- Respondents had an average of 17.3 years of experience in their current professions
- The vast majority of respondents (95.3%) reported clinical practice as their primary job function
- The largest percentage of respondents (33.9%) reported working in a group practice, followed by solo practice (22.4%)
- Approximately two-thirds (66.7%) of respondents reported having had training in occupational health, but few (27.7%) had attended training courses for CMV driver physical examinations
- About one-half of respondents reported primarily working in occupational health
- Respondents completed an average of 43.5 FMCSA physical examinations each month
- Respondents had been performing FMCSA physical examinations for an average of 12.1 years
- There was roughly equal representation of rural, suburban, and rural communities in the sample
- On average, survey respondents reported knowing the following numbers of professionals who performed FMCSA physical examinations:
    - 2 APNs
    - 1 DC
    - 2 DOs
    - 9 MDs
    - 3 PAs
- Nearly two-thirds (63.7%) of respondents were male
- The majority of respondents (88.7%) identified their racial and ethnic background as white, non-Hispanic

More detailed results about sample demographics are provided in figures within this section.

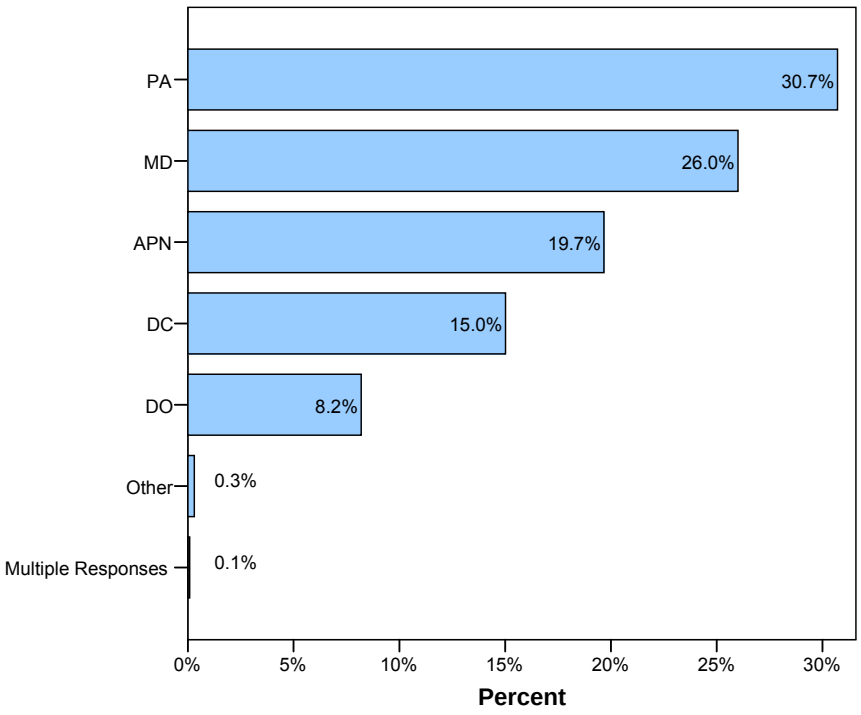

Figure 3. Breakdown of Respondent Professions. *n*=2,257

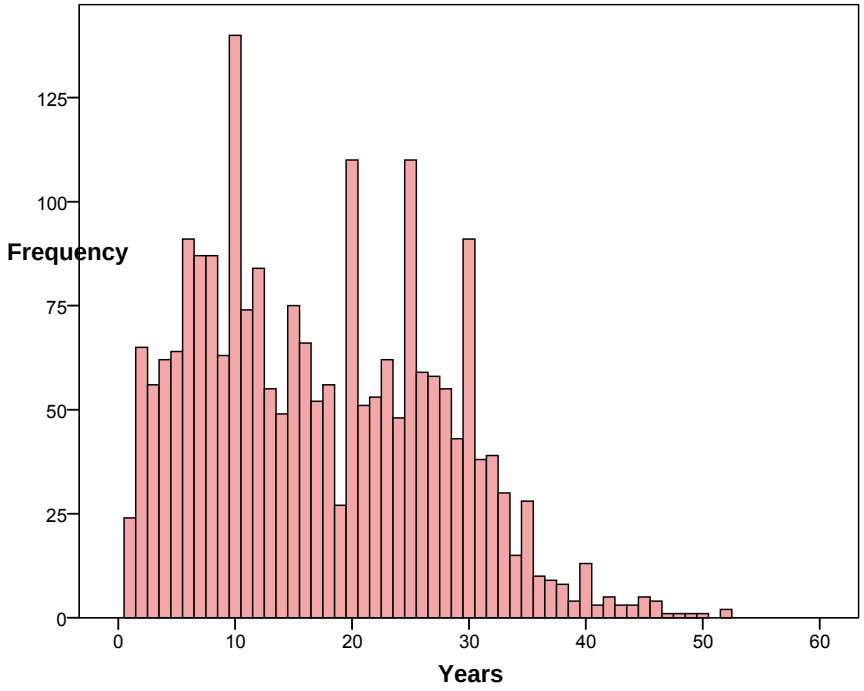

Figure 4. Breakdown of Respondent Experience in Current Profession. *n*=2,240

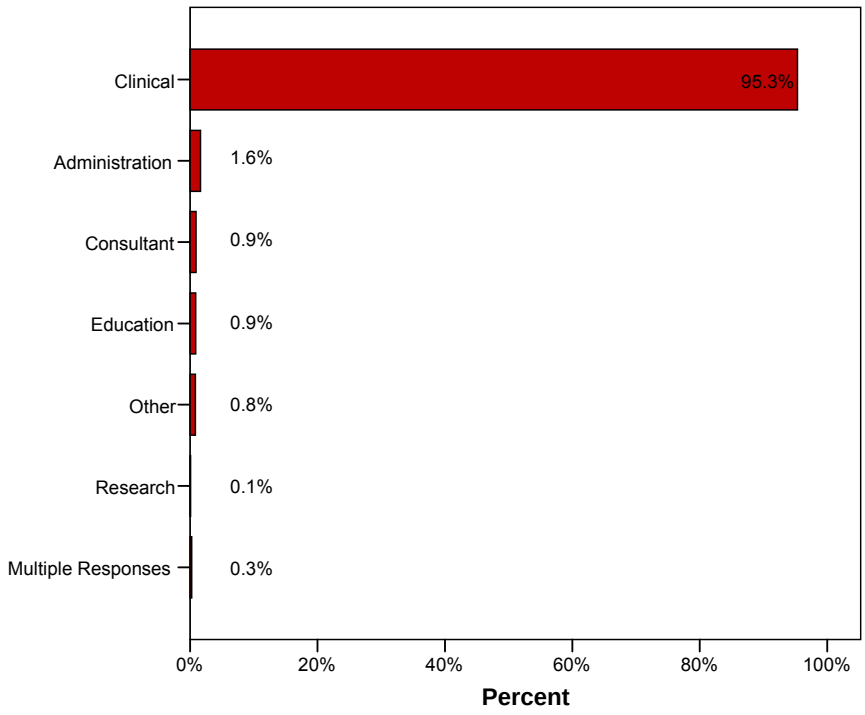

Figure 5. Breakdown of Respondent Primary Job Functions. *n*=2,256

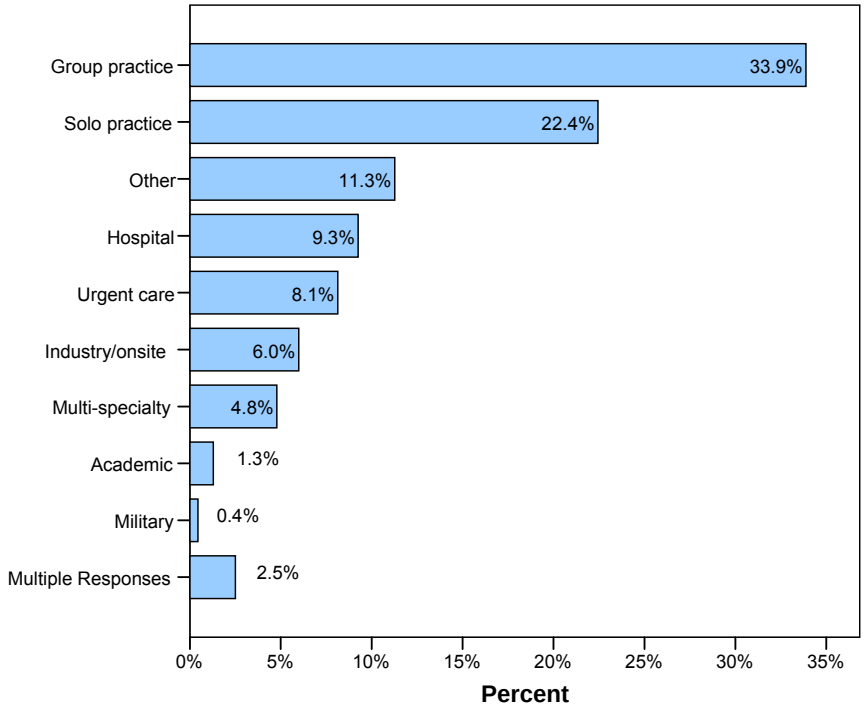

Figure 6. Breakdown of Respondent Healthcare Environments. *n*=2,237

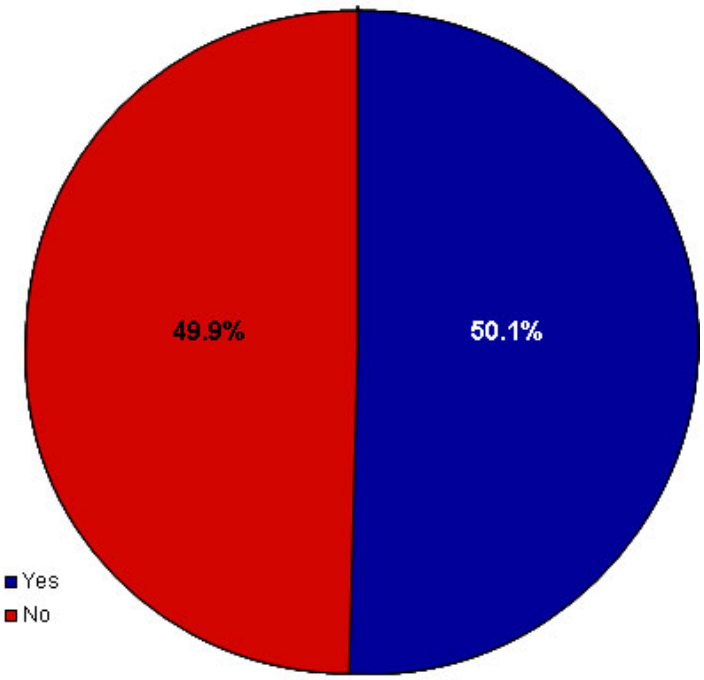

Figure 7. Percentage of Respondents Who Primarily Work in Occupational Health. *n*=2,250

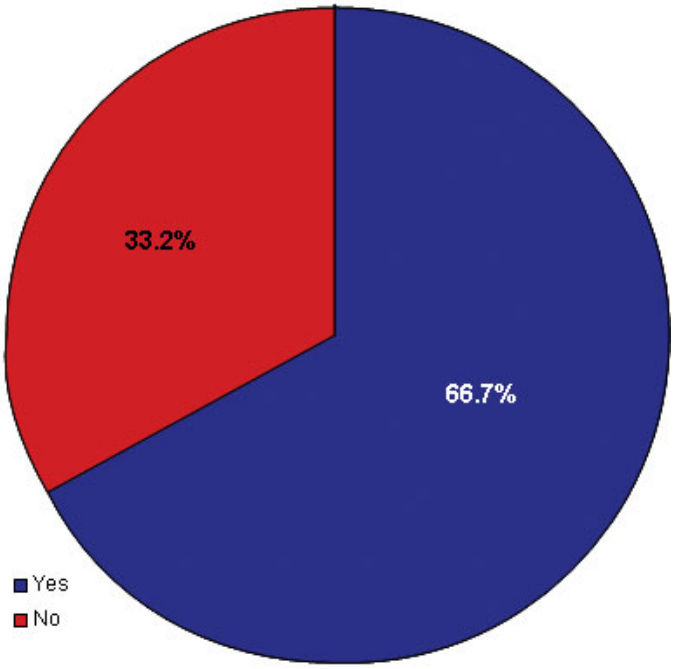

Figure 8. Percentage of Respondents Trained in Occupational Health. *n*=2,241

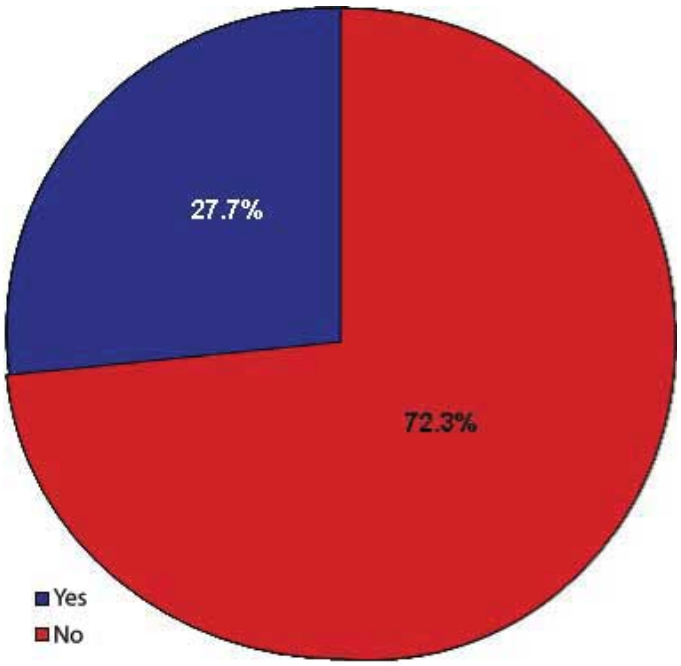

Figure 9. Percentage of Respondents Trained to Conduct CMV Driver Physical Examinations. *n*=2,234

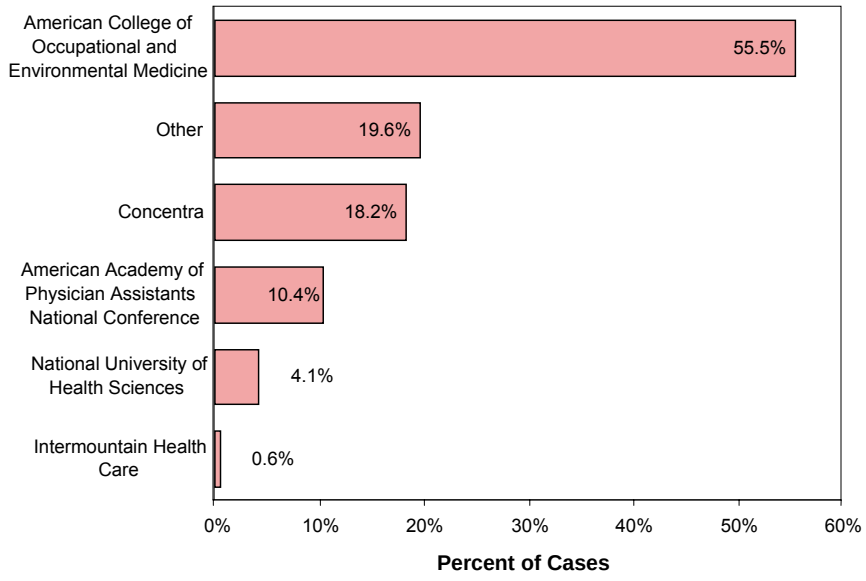

Figure 10. Organizations Reported to have Provided CMV Driver Physical Examination Training. *n*=668. Medical examiners could give multiple responses to this question.

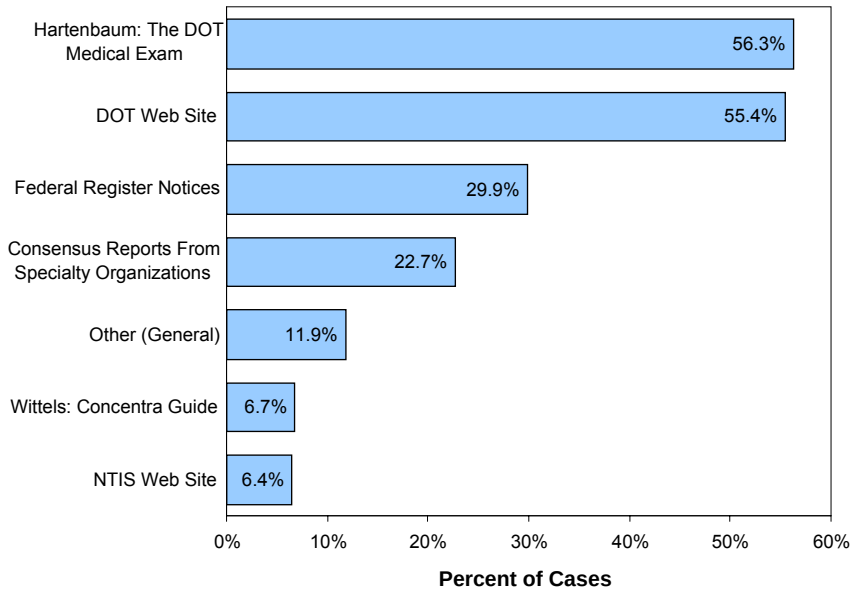

Figure 11. General References Used by Respondents. *n*=8,738 Medical examiners could give multiple responses to this question.

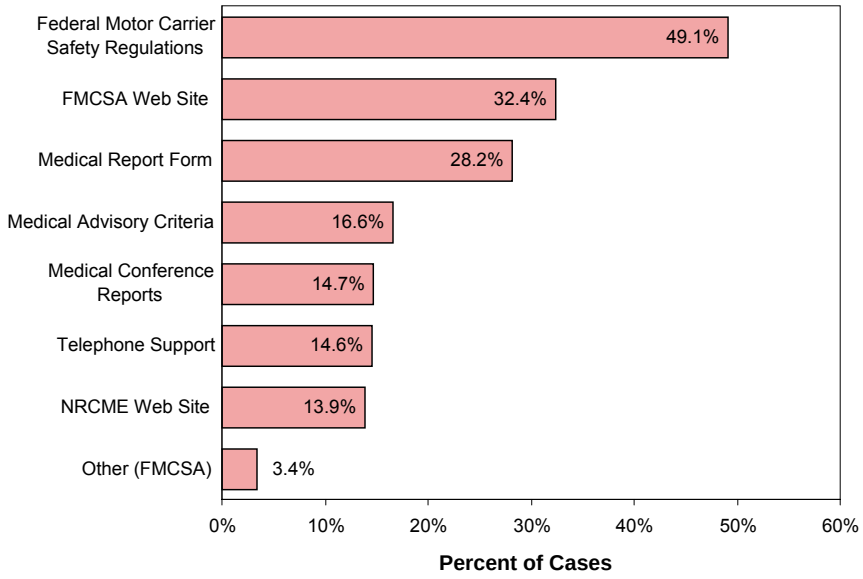

Figure 12. FMCSA References Used by Respondents. *n*=8,738 Medical examiners could give multiple responses to this question.

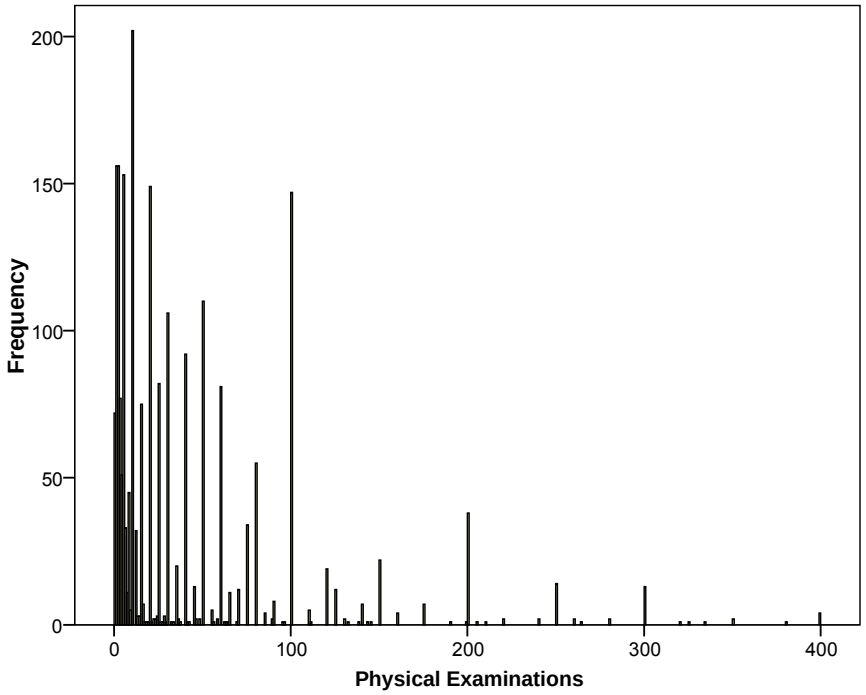

Figure 13. Average Monthly Physical Examinations. *n*=2,231. Responses greater than 400 were categorized as outliers and removed. This resulted in the removal of the following 11 responses: 500 (5 cases), 600, 900, 1,000 (3 cases), and 1,125.

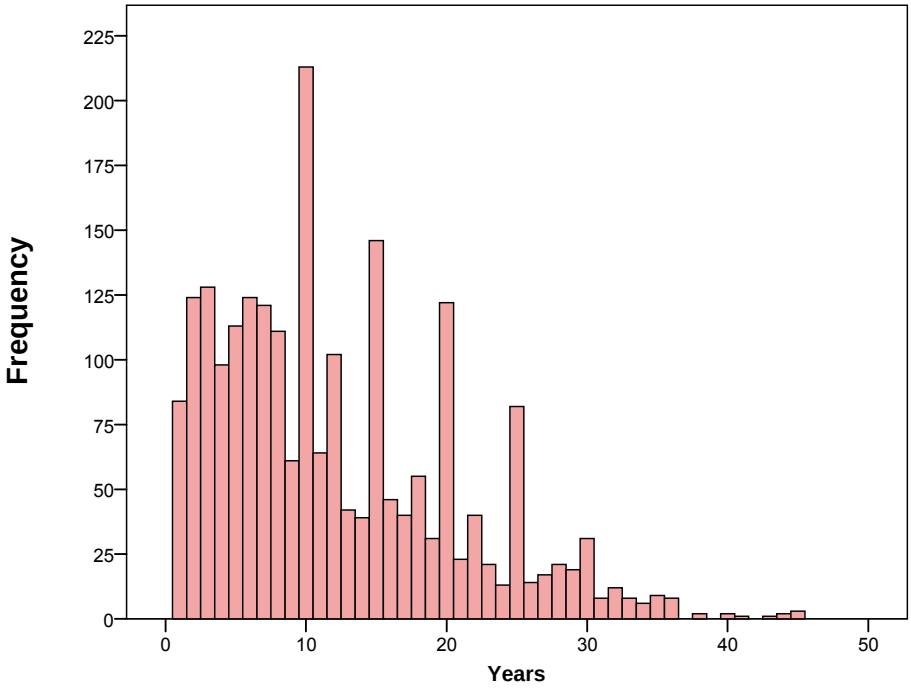

Figure 14. Experience Performing CMV Driver Physical Examinations. *n*=2,208. One response of 55 was categorized as an outlier and removed.

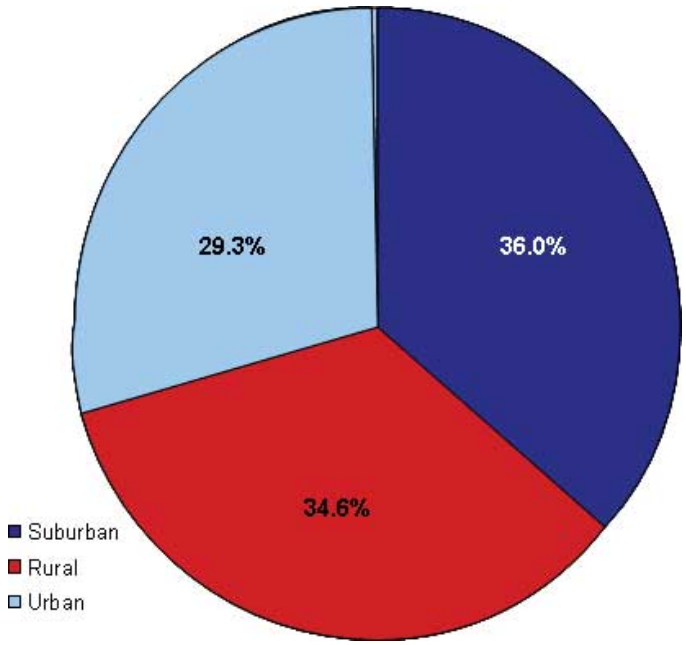

Figure 15. Communities in Which Respondents Practiced. *n*=2,235

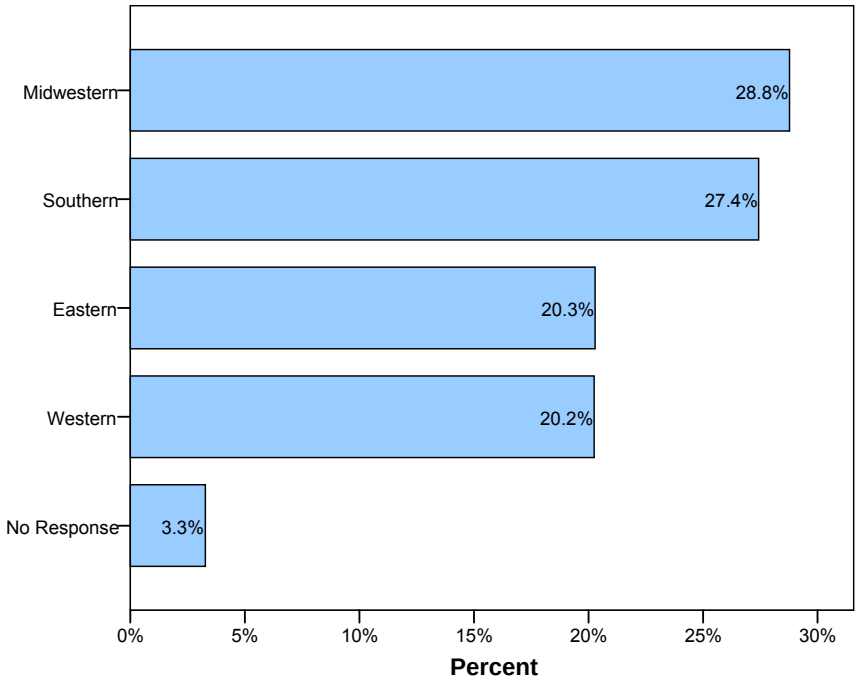

Figure 16. Breakdown of Respondent Geographic Regions. *n*=2,222
The survey prompted medical examiners for zip codes, which were grouped into these regions by FMCSA staff.

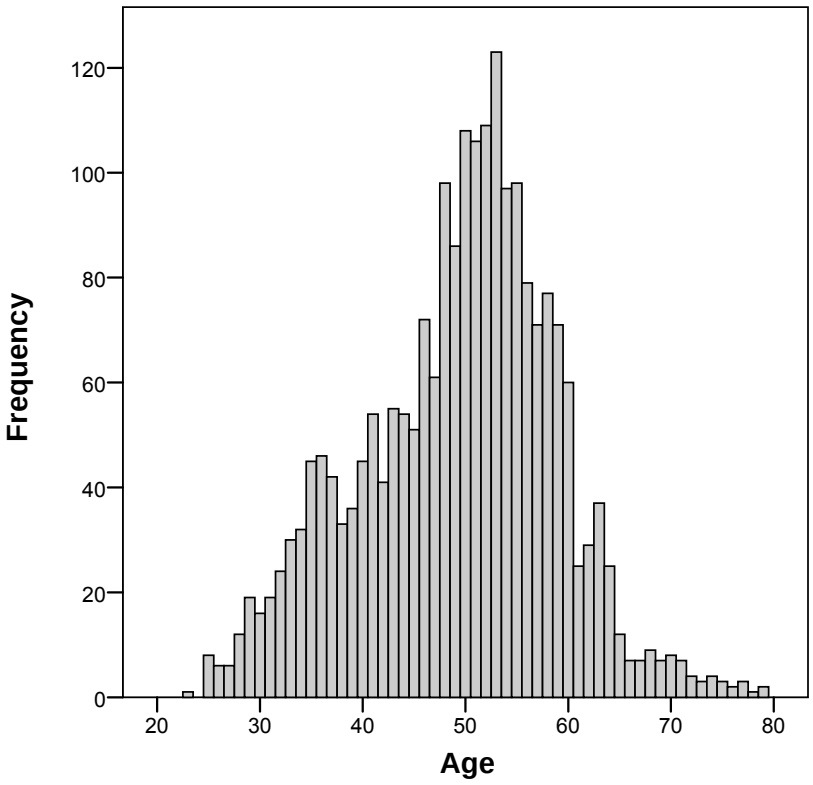

Figure 17. Breakdown of Respondent Ages. *n*=2,186. These data were extrapolated from responses to a question asking respondents to report the year of their birth.

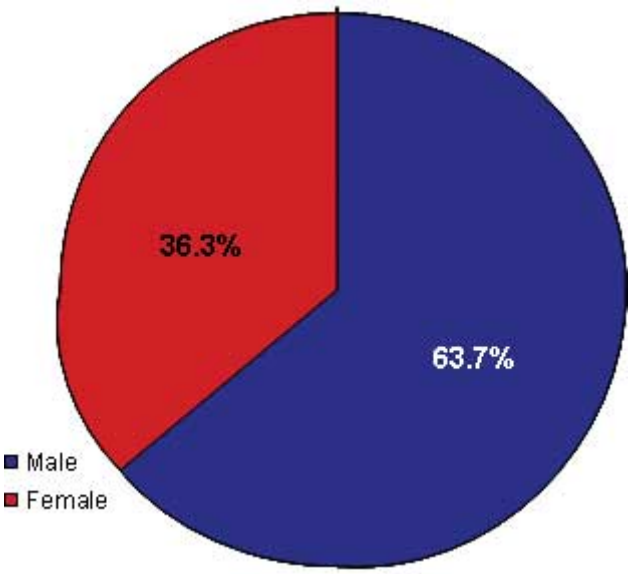

Figure 18. Breakdown of Respondent Genders. *n*=2,124

Table 7

Breakdown of Responses Regarding Race/Ethnicity

			Ethnicity		Total
			Hispanic	Non-Hispanic	
Race	American Indian or Alaska Native	Count	13	31	44
		% of Cases	.6%	1.4%	2.0%
	Asian	Count	15	58	73
		% of Cases	.7%	2.7%	3.4%
	Black or African American	Count	31	58	89
		% of Cases	1.4%	2.7%	4.1%
	Native Hawaiian or Pacific Islander	Count	3	16	19
		% of Cases	.1%	.7%	.8%
	White	Count	148	1913	2061
		% of Cases	6.9%	88.7%	95.6%
Total		Count	210	2076	2286
		% of Cases	9.7%	96.2%	

Medical examiners could give multiple responses to this question.

EVALUATION OF SAMPLING BIAS

Comparisons of Opt-In and Opt-Out Samples

Although the Role Delineation Study began with a sample of medical examiners that had opted in to participate, study methods permitted sample members to opt out of full participation after they had received the task inventory, while still completing a follow-up survey containing only demographic questions. Medical examiners who responded to the follow-up survey represented 22.0% of the adjusted sample of 4,050 medical examiners. In sum, 3,188 medical examiners (2,297 from the full survey + 891 from the follow-up survey), or 78.7% of the adjusted sample, responded to either the task inventory or the opt-out survey. This only left 21.3% of the adjusted sample who gave no responses to either survey. However, the 78.7% of respondents could have been slightly inflated by medical examiners who mistakenly returned both surveys, so AMP staff advised the WIPT to exercise some caution when interpreting this result. Likewise, the following comparisons between opt-in and opt-out samples should be tempered with caution, since it was possible for some medical examiners to have been represented in both groups.

The WIPT compared demographic characteristics of the opt-out group to the task inventory group. The opt-out group provided the best available information about medical examiners who did not respond to the full survey. Through this comparison, the WIPT planned to assess the degree to which task inventory respondents might be systematically different from the rest of the medical examiner population, potentially yielding biased task ratings.

No statistically significant (α=.05) differences were observed between opt-in and opt-out groups on the following variables:

- Age & gender
- APN & PA backgrounds
- Midwest & west region subgroups
- Distribution among rural, suburban, and urban communities
- Primary job function subgroups
- Training in CMV driver physical examinations
- Experience performing CMV driver physical examinations

Significant differences were observed between the opt-in and opt-out groups of medical examiners on some variables. However, AMP staff characterized these differences for the WIPT as small and only made apparent by the strong statistical power associated with these large samples. Significantly larger percentages were recorded for the opt-in group than for the opt-out group in regard to the following variables:

- Had occupational health training (p=.03)
  - 66.7% of 2,240 vs. 62.6% of 886
- Worked primarily in occupational health (p<.001)
  - 50.1% of 2,250 vs. 40.3% of 885
- Were MDs (p=.007)
  - 26.0% of 2,255 vs. 21.4% of 889
- Were from the eastern region (p=.001)
  - 20.3% of 2,297 vs. 16.7% of 891

- Worked in multiple settings (p<.001)
  - 2.5% of 2,237 vs. 0.2% of 890

The opt-in group also averaged more (mean=43.5, SD=76.5, n=2,231) physical examinations each month than medical examiners who opted out (mean=36.1, SD=69.2, n=878) from full survey participation.

Significantly larger percentages were recorded for the opt-out group than for the opt-in group with regard to the following variables:

- Were chiropractors (p=.007)
  - 18.0% of 889 vs. 15.0% of 2,255
- Were doctors of osteopathy (p=.007)
  - 11.0% of 889 vs. 8.2% of 2,255
- Worked in solo practice (p<.001)
  - 28.0% of 890 vs. 22.4% of 2,237
- Were from the southern region (p=.001)
  - 31.8% of 891 vs. 27.4% of 2,297

After learning that medical examiners in the opt-in group tended to perform slightly more physical examinations each month, were more likely to have an occupational health background, and were more likely to be medical doctors, the WIPT members' collective confidence was solidified to use task ratings as a tool to identify critical tasks.

Analyses of Professional Networks

As indicated earlier, medical examiners who qualify CMV drivers are not conveniently listed for reference in sample surveys. Consequently, a well-defined population from which one can sample does not exist; thus, the population is said to be hidden. Attempts to study hidden populations using standard sampling and estimation techniques are not possible. In such situations, alternative sampling methods are required.

One alternative approach that has been used to sample from a hidden population comes from network theory, where it is commonly referred to as respondent-driven sampling or snowball sampling. In this sampling technique, as was the case in this study, existing participants recruit future participants from among their professional acquaintances, meaning that they are from the same professional network. Because sample members are not selected from a sampling frame (a list of the accessible population from which the sample will be drawn), snowball samples are subject to numerous biases.

One important potential source of bias associated with the sampling technique used in the current survey is the likelihood that individuals who are from the same network tend to share more similarities than individuals who are not from the same network. This concept is known among social scientists as homophily. The major consequence of homophily for findings of this survey is that findings may not generalize to the broader population of medical examiners.

The purpose of the analyses presented here is to determine, using ordinal regression techniques, whether the size and composition of the professional networks to which respondents belong relate to their ratings of importance for each of the 146 tasks assessed by the survey. If such a trend is observed, our secondary purpose is to model

this relationship and predict what the findings of the survey might be after adjusting for this bias.

Data for 146 tasks were analyzed using the ordinal regression procedure of SPSS. The SPSS ordinal regression procedure, or PLUM (**P**o**l**ytomous **U**niversal **M**odel), is an extension of the general linear model to ordinal categorical data. The ordinal logistic model is based on the assumption that there is a latent continuous outcome variable and that the observed ordinal outcome arises from the apportionment of the underlying continuum into *j*-ordered groups. The thresholds estimate these cutoff values. A more detailed discussion of this procedure, as well as the findings of each of the 146 separate analyses that were performed, can be found in Appendix T.

These analyses demonstrate that a consistent relationship existed between a respondent's opinion as to the importance of a task and the number of individuals known to the respondent who perform physical examinations for CMV driver certification. In general, the analyses demonstrate that the fewer individuals performing physical examinations for CMV drivers that a respondent knows, the more likely the respondent is to judge a task to be of high importance. This is indirect evidence that a network effect may have influenced survey findings. Given the purpose of the survey, however, and the fact that adjustment for this effect did not, in any instance, diminish the importance of any task, the importance of the existence of this bias appears to be inconsequential.

TASK CRITICALITY ANALYSES

As a part of defining the role of medical examiners in detail, this study identified tasks critical to competent practice. The goal of evaluating task criticality information was to limit certification test content to those tasks that were critical. Medical examiners were asked whether they performed each task in the task list. Tasks that were not performed extensively among medical examiners would be difficult to defend as test content. Among tasks that were extensively performed, the study plan also dictated that the evaluation of importance for competent practice be governed by the probability of a medical examiner enhancing public safety. Therefore, tasks labeled as critical were identified from observations about extent and importance. Anticipating defense of certification test content would also require demonstration that tasks were critical for subgroups of the medical examiner population; as a result, the study plan called for the WIPT to compare the importance of each task among several subgroups.

Consistent with the study plan to evaluate extent in practice, global importance, and subgroup importance among tasks, AMP defined the following three lines of inquiry:

- Which tasks were performed extensively enough among all respondents to be considered critical?
- Which tasks were important enough for all respondents to be considered critical?
- Which tasks were important enough for population subgroups to be considered critical?

The WIPT addressed the first of these points first. Respondents who never performed a task were instructed to select the zero (0) scale point (see the survey in Appendix B). By subtracting the percentage never performed from 100, a *% perform* value was calculated for each task. These values are displayed in Appendices G and H. Results shown in Appendix G were used by the WIPT during the first step of deliberations about task

criticality. This appendix displays the task list sorted by *% perform* values, so that the least extensively performed tasks appear at the top of the list. AMP staff asked WIPT members whether there was sufficient extent-in-practice evidence to support retaining every task or whether some tasks should be excluded. The WIPT concluded that every task appeared to be extensively performed, since each task was performed by at least two-thirds of the sample. AMP staff advised that this was above the threshold typically required as part of studies of this kind. Even though every task was retained, AMP staff established the first exclusion rule to document this first step of task criticality analyses; tasks performed by less than 66.7% of the sample would have been excluded.

The WIPT then turned its attention to the task list as displayed in Appendix H, which sorted tasks by ratings of importance, from lowest to highest. The WIPT also observed Table 8, which indicated that every task was at least above average in importance for medical examiner competence. AMP staff advised that a task typically must show a mean importance value of at least 2.50 to be defended as critical, since this was the lowest value that still rounded up to the value associated with “above average.” Tasks with mean importance values associated with “below average” or “low” importance could not be justified as critical to medical examiner competence. Here, again, the WIPT found that every task had a sufficiently high rating to support retention. AMP staff established a second exclusion rule to document the decision by the WIPT and show that even the least important task still had a mean importance value that exceeded 2.60. At this point, the WIPT could observe that each task was performed by more than two-thirds of the sample and that survey respondents found each task at least above average in importance to their competence as a medical examiner.

Having retained every task after the first two task evaluations were completed, the WIPT focused on whether tasks that were critical for the whole sample were also critical for subgroups within the sample. Table 9 summarizes the ways in which AMP staff created subgroups within the sample and the basis for exclusion rules 3 through 13 for these additional task importance analyses. Details about each set of subgroup comparisons are found in Appendices I through S. Subgroup comparisons of mean importance revealed to the WIPT whether each task was still sufficiently important for medical examiners in each group. This third step also helped the WIPT confirm that building tests around the full task list could be defended as fair, since subgroups tended to find each task at least above average in importance for medical examiner competence.

Table 8
Summary of Mean Task Importance Ratings

Responses	Mean Value Ranges	Frequency	%
High importance	3.50 - 4.00	65	44.5
Above average importance	2.50 - 3.49	81	55.5
Below average importance	1.50 - 2.49	0	0.0
Low Importance	1.00 - 1.49	0	0.0
Total		146	100.0

Table 9
Summary of Subgroup Exclusion Rules

Exclusion Rule	Subgroups	
3	Region	Eastern Southern Midwestern Western
4	Profession	APN DC DO MD PA
5	Years in profession	1-10 11-22 23 or more
6	Occupational health as primary work responsibility	Yes No
7	Occupational health training	Yes No
8	Training course attendance	Yes No
9	Number of physical examinations performed per month	0 1-4 5-19 20-48 49 or more
10	Years performing physical examinations	1-5 6-11 12-17 18 or more

Table 9 *Continued*		
11	Community	Rural Suburban Urban
12	Year of birth	1950 or earlier 1951-1955 1956-1963 1964 or later
13	Gender	Female Male

A few cases were excluded from some of these groups when there were too few of them to create another group. For example, a few homeopathic professionals were a part of the sample, but were removed during application of Rule 4.

Exclusion rules 3 through 13 each employed a threshold value of 2.50 on the importance scale for each group mean value. When there were three or more groups in a set, all but one group mean had to equal or exceed 2.50. When there were only two groups in a set, both means had to equal or exceed 2.50. In addition to observing that every task was performed by at least two-thirds of the sample (Rule 1) and was at least above average in importance for competent performance as a medical examiner (Rule 2), the WIPT could observe that every task was sufficiently important:

- in at least 3 out of 4 regional groups (Rule 3), and
- for 4 out of 5 of the professional groups (Rule 4), and
- for 2 out of 3 groups based on experience as a medical professional (Rule 5), and
- for both groups whether they worked in occupational health or not (Rule 6), and
- for both groups whether they had received occupational health training or not (Rule 7), and
- for both groups whether they had attended a medical examiner training course or not (Rule 8), and
- in 4 out of 5 groups based on the number of physical examinations they performed (Rule 9), and
- in 3 out of 4 groups based on how much experience they had performing physical examinations (Rule 10), and
- in 2 out of 3 groups based on the community in which they practiced (Rule 11), and
- in 3 out of 4 groups based on respondent ages (Rule 12), and
- for both gender groups (Rule 13).

This 13-hurdle approach provided the procedure for establishing task criticality; surviving tasks were critical. It also established these tasks as the basis for a set of defensible competencies for a certification program that could be defended as fair for medical examiners. Appendix U contains each exclusion rule and a summary of the outcome for each task.

Because a certification test of this type serves a public protection goal, AMP staff directed the WIPT to search once more for content that might have been missing from the task inventory. The WIPT reviewed comments from survey participants who

responded to the opportunity to suggest content that should have been included in the task list. Comments obtained from the full survey are shown in Appendix V and comments from the follow-up survey appear in Appendix W. The WIPT did not find any critical tasks to add, so certification test content will be drawn from the 146 tasks found to be critical by this study.

DEVELOPMENT OF TESTING AND TRAINING CONTENT

Detailed Test Content Outline

Once the WIPT had identified competencies the medical examiner certification test should cover, AMP staff facilitated test-specification development. Test specifications describe the distribution of items on an examination by content domain and complexity level. One may also refer to a set of test specifications as the test blueprint in order to emphasize that the same guidelines govern the development of each form of an examination. A synonym for the phrase “test specifications” is “examination matrix,” which emphasizes the two-dimensional nature of a typical test-specifications table.

AMP staff began the process by describing and distinguishing recall, application, and analysis cognitive levels, which represented the second dimension for these test specifications. The seminal description of cognitive levels is attributed to Bloom (Bloom,1956) who recognized that some behaviors, and in this context some competencies, are more complex than others. Distillations of this concept over the years have produced various simplifications, particularly as they apply to examination development. The WIPT selected the following cognitive level classifications for the medical examiner certification test:

1. **Recall**
   Performance only requires identification or recollection of isolated information, such as facts, generalizations, concepts, principles, or procedures. Correct actions generally do not vary relative to the situation.

2. **Application**
   Performance requires comprehension, interpretation, or manipulation of concepts or data. The response or outcome depends on the situation, but is not overly complex. These tasks require the practitioner to recognize elements and relationships among data and to classify, explain, or differentiate.

3. **Analysis**
   Performance requires integration or synthesis of a variety of concepts and elements to solve a specific problem. The “analysis level” label was given to problem solving requiring the evaluation of complex problems with many situational variables, as well as tasks requiring practitioners to use judgment to find the best solution.

AMP staff gave the WIPT a numeric coding system to emphasize the hierarchical nature of cognitive level designations. WIPT members assigned cognitive levels (1 = recall, 2 = application, or 3 = analysis) by consensus to each critical task. AMP staff instructed WIPT members that the cognitive level code should align with the typical complexity

experienced by a medical examiner while performing a task. Cognitive level coding outcomes are shown in Appendix X.

Tasks assigned level 1 could support only test items written at the recall level. For example, Task ID5b, “Include if available documentation of intracity zone exemption” (Appendix X), requires only recognizing whether or not a CMV driver has this type of exemption. A cognitive level code of 1 indicates that a competent medical examiner should be able to recognize when such an exemption is in force.

Tasks assigned level 2 could support test items written at recall or application levels. For example, Task IC1a was, “Obtain additional information when indicated by audiometrics” (Appendix X). A cognitive level code of 2 indicates that a competent medical examiner should be able to determine when simple hearing measurements do not suffice and more information is necessary. However, the quantity of information a medical examiner must consider in this case is typically limited to hearing measurements. There is also not a strong problem-solving element to seeking additional audiometric information. Therefore, analysis level test items will not be permitted on any tests that link to this task. Recall level items are permitted in addition to application level items, since a medical examiner may have to remember a threshold from Federal guidelines or regulations before he or she can apply them to measurements from a CMV driver.

Tasks assigned level 3 can support test items written at the recall, application, or analysis level. For example, Task IIC6 was, “Certify a driver for an appropriate interval” (Appendix X). A cognitive level code of 3 indicates that this decision typically could be very complex, moderately complex, or simple, depending on the particular case. A medical examiner may be required to recognize whether a Federal guideline or regulation applies. The certification interval should mirror the risk associated with putting a CMV driver back on the road, particularly when no specific guidance is available to the medical examiner.

The WIPT intended to use these cognitive levels for item writing and test development in order to encourage test scores informed by the complexity and content of the job. When one of these cognitive levels is combined with a task statement, a prescription will be produced for a writer about the kind of item to write. Therefore, scores generated from tests containing these items should reflect the complexity of competent practice.

Means shown in Appendix X were considered by the WIPT to help guide decisions about specifications by cognitive level for the whole test. Open cells in the Detailed Content Outline shown in Appendix Y show available cognitive levels for each task and were based on consensus designations by the WIPT. The WIPT also evaluated the number of open cells in each content domain to help them decide how to specify items for test forms.

Final steps in test specification development involved assigning item counts for each intersection of a content domain and cognitive level. AMP staff encouraged the WIPT to consider several factors. Some content domains presented more tasks than other domains. Also, domains with more tasks may deserve heavier weightings on a test than domains with fewer tasks. Domains containing tasks that support items with higher levels of cognition may deserve to be more heavily weighted than domains with tasks associated with limited cognition.

The survey for this study included a question that asked respondents to indicate how they would weight items in each content domain. Respondents were expected to consider the breadth of tasks listed in each domain and to compare the importance of each domain when they gave their responses to this question. These responses are summarized in Table 10. AMP advised WIPT members to consider the order of content domains as ranked by survey respondents in Table 10 when determining item weightings.

The WIPT used an iterative process in which weightings by content domain and cognitive level were proposed and revised. The final test specifications shown in Table 11 ultimately reflected survey results and the consensus of WIPT members. This blend of survey results and consensus among medical examiners is superior to using either element alone.

Table 10
Summary of Respondent Content-Weighting Preferences

	N						
Content Area	Valid	Missing	Mean	SE_{Mean}	*SD*	Min	Max
I.A. Identification and History	2,228	69	23	.28	13.06	0	80
I.B. Physical Examination and Evaluation	2,229	68	32	.31	14.45	3	95
I.C. Diagnostic Tests and/or Referrals	2,219	78	11	.13	6.03	0	40
I.D. Documentation of Ancillary Information	2,199	98	8	.10	4.79	0	100
II.A. Health Education Counseling	2,183	114	7	.09	4.33	0	40
II.B. Risk Assessment	2,200	97	10	.14	6.74	0	55
II.C. Certification Outcomes and Intervals	2,196	101	9	.13	6.06	0	80
Sum			100				

Table 11
Test Specifications

FMCSA Medical Examiners	**Items**			
	Cognitive Level			**Totals**
Content Area	**Recall**	**Application**	**Analysis**	
I. DRIVER'S MEDICAL INFORMATION	**23**	**33**	**14**	**70**
A. Identification and History	4	6	10	20
B. Physical Examination and Evaluation	8	15	2	25

Table 11 *Continued*				
C. Diagnostic Tests and/or Referrals	6	10	2	18
D. Documentation of Ancillary Information	5	2	0	7
II. DETERMINATION OF DRIVER'S QUALIFICATIONS AND DISPOSITION	**7**	**12**	**11**	**30**
A. Health Education Counseling	2	1	1	4
B. Risk Assessment	2	4	8	14
C. Certification Outcomes and Intervals	3	7	2	12
Totals	**30**	**45**	**25**	**100**

Knowledge, Skill, and Ability (KSA) Statements

Study results were intended to identify content for medical examiner training and certification. The fact that training and test content were grounded in a role delineation study provides solid evidence that expectations for medical examiner competence were purposefully found. Candidates for certification as medical examiners will have to complete training before they may attempt the test.

The purposes of FMCSA medical examiner core training are to:

- prepare the candidate for FMCSA medical examiner certification and recertification tests by
  - relating FMCSA regulations and guidelines to the competent performance of driver physical examinations
  - identifying and reviewing the best practice performance standards for critical tasks
  - presenting relevant information about the CMV driving industry, driver environment, and job requirements
  - differentiating between risk of crash involvement and other risk for the driver
  - analyzing the determination decisions for CMV driver certification
- ensure that medical examiners receive education for highly important but rarely performed tasks by
  - identifying conditions that require performance of the tasks
  - reviewing appropriate task performance
  - identifying resource(s) to support appropriate task performance (e.g., FMCSA medical conference reports, Web sites)
- motivate medical examiners to close identified performance gaps by
  - relating public and personal consequences to inadequate FMCSA medical examiner performance
  - providing a forum for individual and group input about barriers to optimal FMCSA medical examiner performance
  - facilitating a professional exchange of ideas, best practices, and knowledge, skills, and abilities
  - providing a summary of current FMCSA medical examiner resources
- assess comprehension of training content by
  - providing content-specific self-check exercises
  - providing practice scenarios
  - providing a current content outline for preparation for the certification test

While tasks are essential to describe the competent behaviors a certification test should cover, these statements typically leave unstated some supporting KSAs that medical examiners may use. The next step in the Role Delineation Study process was for the AMP and Axiom staff to interact with the WIPT to associate each task with KSAs. Learning objectives will be developed from KSAs so that medical examiners receive the information they need during training to behave competently.

Knowledge. Knowledge statements describe a body of information associated with successful task performance. Knowledge statements included FMCSA regulations, advisory criteria, guidance, medical conference reports, and other FMCSA documentation. At least one knowledge statement was required per task, but some tasks supported more than one knowledge statement. Knowledge statements typically begin with the phrase "Knowledge of," as in "*Knowledge of medical advisory criteria in 49 CFR 391.41(b)(1) and (b)(2) regarding physical examinations of drivers' extremities.*"

Skill. Skill statements describe the proficiency level of a medical examiner performing a task. Skills are typically psychomotor in nature and often involve manipulation of work tools. For example, it is a skill to use a stethoscope to auscultate a patient's chest and discern one heart sound from another. Some medical examiners are better at auscultation than others, indicating different possible degrees of performance, which is another characteristic of a skill. Skill statements typically begin with the phrase "Skill in," as in, *"Skill in performing screening tests for strength and weight bearing to the extent required for safe operation of CMVs*."

Ability. Ability statements identify general, enduring capabilities possessed by medical examiners. An interpretative ability is vital for a medical examiner reviewing a driver's medical history, as is the ability to assess a driver's mental state while communicating with him or her. Ability statements typically begin with the phrase "Ability to," as in "*Ability to assess abnormalities of the extremities*."

Appendix Z displays the KSAs that the WIPT associated with each task. Because the Role Delineation Study found that each task was critical for certification testing, these KSA descriptions are critical for certification training. Two additional WIPTs, one devoted to the work of developing curriculum specifications and another to developing and maintaining the certification test, will be created. The former of these will expand on details described in the KSA document in order to develop a complete training curriculum for the program. Each medical examiner who seeks certification will receive training before he or she attempts the certification test.

STUDY LIMITATIONS

Limitations of the current Role Delineation Study should be acknowledged. As indicated, the population of interest was largely hidden, so no sampling frame existed from which to draw a random study sample. Therefore, researchers used a convenience sample of volunteers. Although responses were obtained from approximately 78% of the 4,050 examiners in the adjusted sample, many practitioners who performed CMV driver physical examinations were not included.

For example, FMCSA estimates that 40,000 medical examiners will be needed to medically qualify CMV drivers. Assuming that there are tens of thousands of practitioners who perform these examinations, the substantial efforts of Axiom staff to recruit volunteers for the Role Delineation Study identified only a small fraction of the population. Given these assumptions, these results can extend only to those individuals who gave survey responses. In order to generalize the results of the Role Delineation Study with confidence, the population will have to be studied further—ideally after the establishment of a definitive sampling frame.

The NRCME will eventually generate a definitive sampling frame, so future studies of the medical examiner role should be able to proceed with fewer unknown sources of potential variability. Future role delineation studies would serve as tools to maintain the relevance of certification test content. These studies may also present opportunities for fuller descriptions of the medical examiner population.

CONCLUSIONS

Research staff began this Role Delineation Study with a literature review, direct observations, and regional brainstorming sessions, which were employed to develop a draft task list around which a role delineation study survey for medical examiners was developed. The WIPT finalized the task list to identify potentially critical tasks associated with the medical examiner role. Research staff sent the task list, comprising elements of CMV driver physical examinations, to more than 4,000 medical examiners in survey format. AMP then used survey responses to obtain demographic characteristics of respondents and assess the criticality of tasks, where criticality was defined by measurements reflecting extent in practice and importance to competence.

There were three sample groups in this study: a group who opted in for the whole study, a group who opted to decline after they received the survey, and a group who gave no response of any kind. Just more than one-half of medical examiners remained in the opt-in group. Nearly a quarter of the sample gave demographic responses to a shorter survey, but opted out of full study participation. This left a sample of 21.3% from whom no response was received. The opt-in and opt-out groups were more likely to represent characteristics of the medical examiner population, since they accounted for 78.7% of the survey population, minimizing concern about nonresponse bias in study results. A comparison of the groups of full and follow-up survey respondents did identify some statistically significant differences, but these were subtle at best. Therefore, sample responses could be used confidently to guide the identification of tasks critical to medical examiner competence.

The response rate was higher than is typical for private-sector studies of this kind. As a result, the quantity of error in survey results was very small in comparison to similar studies of jobs and roles. Confidence in the generalizability of survey results to the population of medical examiners was therefore higher than similar studies with lower response rates and smaller samples. Factors encouraging responses included the following:

- A committed sample of medical examiners opted in for study participation
- A postcard alerted respondents to the pending arrival of the survey
- A reminder letter followed survey delivery
- Weekly email reminders were sent during the survey phase
- The survey return deadline was extended

Respondents gave reliable ratings, suggesting a high probability of similar task criticality outcomes for the population. The sample also indicated that the content domain was adequately covered by the task list. In addition, the WIPT determined that the sample represented important demographic subgroups well enough to have confidence in study results.

The WIPT established exclusion rules to use when reviewing each of 146 tasks. Once established, the WIPT made no exception in applying exclusion rules. Therefore, test content was determined as objectively as possible. All 146 tasks surmounted the rigorous exclusion rules set by the WIPT. At least 66.7% of the population can be expected to perform each critical task and find these tasks at least above average in

importance to competent practice. Subgroups within the population can also be expected to endorse these tasks. Therefore, all available evidence indicates that each of the 146 tasks was truly critical.

Final item allocations for each intersection of a content domain and cognitive level in the test specifications table were based on medical examiner survey responses and the consensus among the medical examiners appointed to the WIPT. The fact that medical examiners played a vital role in establishing competency expectations for other medical examiners supports the expectation that medical examiner certification will yield fair results.

Stakeholders can be confident that tests constructed of items linked to the content outline will produce scores that fairly measure job behavior and tap constructs critical to competent practice. By strictly following test specifications during each test development cycle, test content and complexity are very likely to be relevant to practice. Study results provided substantial evidence that test scores should validly reflect competent medical examiner practice.

Finally, the WIPT developed KSAs, which were intended to produce the content around which the training curriculum will be developed. As indicated, two successor WIPTS composed of medical examiners will focus respectively on the development of training curriculum and the development of certification tests. However, the fact that both elements of the program started from the same Role Delineation Study should encourage a high level of content congruence. Strong alignment between training and testing content should improve the application of existing and future Federal regulations and guidelines. An improved, more standardized screening of CMV drivers by certified medical examiners is anticipated, which should result in safer roadways.

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APPENDIX A

Task List Recommendations and Revisions from Regional Brainstorming Meetings

Introduction: Drivers of commercial motor vehicles who cross state boundaries require certification from The Federal Motor Carrier Safety Administration (FMCSA) of the United States Department of Transportation (DOT). Driver certification requires an examination by a licensed medical professional. Only drivers whose physical and cognitive abilities permit them to perform their responsibilities without disproportionate risk to others should be certified. Drivers whose medical conditions are likely to predispose them to sudden incapacitation should be disqualified from certification. This outline is intended to define tasks associated with the medical evaluation.

I. DRIVER'S MEDICAL INFORMATION		
A. History		
1. Identify issues in a driver's medical record including		
a. unexplained weight loss/gain	1.	
b. disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, or macular degeneration)	2.	
c. disorders of the ears (e.g., hearing loss, vertigo, Meniere's)	3.	
d. cardiac symptoms (e.g., syncope, dyspnea, or collapse; murmurs or arrhythmias)	4.	ALL[b]
e. cardiovascular diseases (e.g., congestive heart failure, myocardial infarction, coronary insufficiency, hypertension, or thrombosis)	5.	ALL[b]
f. pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	6.	ALL[b]
g. pulmonary diseases (e.g., emphysema, asthma, carcinoma, tuberculosis, bronchitis, or sleep apnea)	7.	ALL[b]
h. liver diseases (e.g., cirrhosis, hepatitis)	8.	ALL[b]
i. kidney/urologic disorders (e.g., polycystic, nephrotic syndrome)	9.	ALL[b]
j. diabetes (e.g., polydipsia, polyuria)	10.	
k. motor disorders (e.g., rheumatic, arthritic, musculoskeletal, or neuromuscular disorders; chronic lower back pain; and/or neck pain)	11.	ALL[b]
l. neurologic disorders (e.g., loss of consciousness, seizures, or antiseizure medications)	12.	ALL[b]
2. Identify past procedures, treatments, and/or surgeries in the medical record including		ALL[b]
a. coronary artery bypass, pacemaker or defibrillator implantation	13.	ALL[b]
b. amputation and orthotic fitting	14.	ALL[b]
c. anticoagulation therapy for thrombosis	15.	ALL[b]
d. oncology treatments	16.	ALL[b]
e. surgery	17.	
3. Query a driver		
a. about specifics regarding any affirmative responses in history	18.	
b. whether he/she has any medical conditions or current complaints	19.	
c. about any medications and supplements he or she is taking	20.	ALL
d. about the last time he/she sought medical care	21.	
e. about any incidences of disability/physical limitations	22.	
f. about his or her use of		
1) nicotine products (e.g., cigarettes, chewing tobacco)	23.	ALL
2) alcohol (e.g., beer, wine, liquor)	24.	ALL
3) other drugs	25.	ALL
g. about any history of		
1) vision problems	26.	ALL
2) hearing disorders	27.	

Comment [MC1]: Query section should mirror History section.

3) digestive problems/disorders	28.	ALL
4) loss of balance	29.	
5) nervous/psychiatric disorders	30.	ALL
h. about findings that could indicate cardiovascular risk factors including ▪ chest pain ▪ dyspnea ▪ orthopnea ▪ dizziness ▪ palpitations ▪ hypercholesterolemia ▪ family history of heart disease ▪ previous heart procedures or surgeries	31.	ALL
i. about findings that could indicate pulmonary risk factors including ▪ dyspnea ▪ orthopnea ▪ chronic cough ▪ wheezing ▪ asthma ▪ chronic lung disease	32.	ALL
j. who has diabetes regarding	33.	
1) hypoglycemic/hyperglycemic symptoms	34.	
2) his or her last glycohemoglobin value	35.	
3) the frequency of hypoglycemic symptoms/reactions over the last year	36.	
4) glucose monitoring and self-care practices	37.	
k. about findings that could indicate neurological disorders ▪ head/brain injuries, disorders, or illnesses ▪ seizures or epilepsy ▪ loss of/altered consciousness ▪ fainting/dizziness ▪ cerebrovascular disease (e.g., stroke, TIAs) ▪ paralysis ▪ spinal injury or disease ▪ numbness/weakness ▪ headaches/migraines	38.	ALL
l. about findings that could indicate a neuromuscular disorder ▪ muscular disease ▪ missing/impaired limbs ▪ spinal injury/disease ▪ chronic low back/neck pain ▪ hernias	39.	ALL
m. about findings that could indicate a sleep disorder including ▪ daytime somnolence ▪ snoring while asleep ▪ cramping, restless legs while asleep ▪ gasping or choking awakenings ▪ headache on awakening ▪ treatments for sleep apnea	40.	ALL
4. Review information for a driver who was qualified under a limited exemption for diabetes including		

a. blood glucose monitoring logs	41.	ALL
b. an endocrinologist's report	42.	ALL
c. the occurrence of any insulin reactions	43.	ALL
5. Review waivers or previous skill performance evaluation certificate	44.	
6. Identify significant responses in patient history	45.	ALL
B. Physical Examination		
1. Verify the identity of the driver with a photo identification	46.	ALL
2. Note whether a driver is overweight or underweight for his/her height or body habitus	47.	ALL
3. Examine the driver's eyes		
a. assess for		
1) reactivity to light and pupillary equality	48.	ALL
2) evidence of nystagmus and exophthalmos	49.	ALL
b. measure visual parameters including		
1) distant acuity	50.	ALL[c]
2) horizontal field of vision	51.	ALL[c]
3) color recognition	52.	ALL[c]
c. evaluate extraocular movements (EOM) of each eye	53.	ALL
d. perform a fundoscopic examination when retinal disease is likely, or as indicated	54.	N/A
4. Examine the driver's ears		
a. inspect the ear canal and tympanic membrane	55.	ALL
b. screen for hearing abnormalities with appropriate testing (e.g., forced whisper test or audiometry)	56.	ALL[d, e]
c. conduct follow-up audiometric tests as indicated	57.	ALL
5. Examine the driver's mouth and throat for conditions that may interfere with breathing, speaking, or swallowing	58.	ALL
6. Examine the driver's neck		
a. range of motion	59.	ALL
b. soft tissue palpation/examination (e.g., lymph nodes, thyroid gland)	60.	ALL
7. Examine the driver's heart		
a. inspect the chest for surgical scars that may reveal a history of a cardiac disorder	61.	ALL
b. palpate and auscultate over the heart for thrills and murmurs	62.	ALL
c. note heart rate and blood pressure	63.	ALL
d. assess for signs/symptoms of disease including ▪ irregular pulse ▪ distended neck veins ▪ peripheral edema ▪ abnormal heart sounds ▪ shortness of breath ▪ chest pain/diaphoresis ▪ fatigue ▪ fluid retention ▪ carotid bruits ▪ arterial bruits	64.	ALL
8. Examine the driver's lungs/respiratory function, chest, and thorax (excluding breasts) by inspection and auscultation, and note		
a. respiratory rate and pattern	65.	ALL

b. abnormal breath sounds	66.	ALL
c. abnormal chest wall configuration/palpation	67.	ALL
d. evidence of cyanosis	68.	ALL
9. Examine the driver's abdomen and viscera, and note		
a. an enlarged liver or spleen	69.	ALL
b. abnormal masses or bruits/pulsation	70.	ALL
c. abdominal tenderness <or> hernias or tenderness of the abdominal wall	71.	ALL
d. hernias (inguinal/abdominal/femoral)	72.	
10. Examine the driver's spine		
a. note tenderness	73.	
b. inspect for surgical scars and deformities	74.	ALL
c. note loss in range of motion and painful motion	75.	ALL
d. observe for kyphosis, scoliosis, or other spinal deformities	76.	ALL
11. Examine the driver's extremities		
a. note		
1) loss, impairment, or use of orthosis	77.	ALL
2) deformities, atrophy, paralysis, surgical scars, cyanosis, or clubbing	78.	ALL[f]
b. inspect the driver's lower extremities for varicosities, skin abnormalities, leg length discrepancy, and edema	79.	ALL
c. evaluate		
1) elbow, joint, and shoulder strength, function, and mobility	80.	ALL
2) handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	81.	2,5,7,8, 10
3) lower extremity strength, function, and coordination	82.	
4) a driver's gait, mobility, and posture while bearing his or her weight and note limping or signs of pain	83.	
5) power generated by wrist and finger flexion	84.	2,5,7,8, 10
6) precision and power grasp prehension for a driver who has lost or suffered impairment of an extremity	85.	N/A
7) the ability of a driver to sustain a grip on the steering wheel during routine and emergency driving conditions	86.	2,5,7,8, 10
12. Observe		
a. whether a driver appears to be malnourished perhaps as a result of an eating disorder	87.	ALL
b. while a driver bends at the waist, shrugs both shoulders, and raises both hands above his or her head	88.	ALL[g]
c. while a driver pronates and supinates both hands	89.	2,3,4,5,6, 7,8,9,10
d. while a driver flexes, inverts, and abducts both feet and ankles	90.	2,3,4,5,6, 7,8,9,10
13. Examine the driver's neurological and mental status		
a. assess		
1) pupillary reactions and extraoccular movements	91.	ALL
2) appearance of tympanic membranes and middle ear	92.	ALL
3) equilibrium and coordination findings (e.g., Romberg)	93.	ALL

Comment [MC2]: Only add this task if choosing the first option for task c (immediately above).

Comment [R3]: Two groups suggested deleting this task and the next two tasks

Comment [R4]: One group suggested deleting task 12 (including a-d)

Comment [R5]: One group suggested deleting this task

Comment [R6]: Two groups suggested deleting this task

4) sensory or positional abnormalities by observing for tremor, finger to nose test, and balance	94.	ALL
5) radicular symptoms/findings	95.	
6) muscle strength evaluation	96.	
7) reflex responses and ataxia	97.	ALL
b. communicate with the driver to screen and evaluate	98.	
1) sufficiency of language and speech skills relative to job responsibilities	99.	ALL
2) comprehension and interaction	100.	ALL
3) for cognitive impairment (e.g., orientation, intellect, memory)	101.	ALL
4) for signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	102.	ALL
14. Assess for		
a. sleep disorders when weight, blood pressure, and neck size measurements indicate risk	103.	ALL
b. neurologic disorders by observing for tremor, finger-to-nose test, and balance	104.	ALL
C. Diagnostic Tests and Referrals		
1. Refer the driver to a specialist or primary care provider to obtain additional information through testing or further evaluation	105.	N/A
2. Identify the driver's third-party-payer prior to collecting additional information	106.	N/A
3. Administer urinalysis testing including tests for specific gravity, protein, blood, and glucose	107.	
a. order a urinalysis	108.	ALL
b. advise a driver regarding the minimum sample volume to conduct required urinalysis testing	109.	ALL
c. describe the appropriate sequence for collecting urine specimens when a motor carrier sends a potential driver for a pre-employment medical examination and controlled substances test	110.	ALL
4. Refer or perform additional testing as indicated to include, but not limited to		
a. audiometrics	111.	N/A
b. an electrocardiogram	112.	N/A
c. a cardiac stress test (or equivalent)	113.	
d. vascular studies	114.	
e. a chest radiograph	115.	N/A
f. pulmonary function tests (e.g., spirometry, diffusion, lung volumes)	116.	N/A
g. an oximetry or arterial blood gas analysis with or without exercise	117.	N/A
h. a lipid profile	118.	N/A
i. an additional renal function test	119.	N/A
j. a polysomnographic, sleep latency, and/or maintenance-of-wakefulness study	120.	N/A

Comment [R7]: Two groups suggested deleting this task

Comment [R8]: Consider these suggested alternative statements
for signs of emotional/mental instability that may require follow-up with a mental health professional
<OR>
for signs of depression, paranoia, psychosis, or other behavioral issues that may require follow-up with a mental health professional

Comment [R9]: One group suggested deleting task 14 (including a and b)

Comment [R10]: Two groups suggested deleting this task

Comment [R11]: Two groups suggested deleting tasks 3a through 3c

Comment [MC12]: One group suggested that the following list should be grouped by system.

5. Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider ▪ vision (e.g., retinopathy, macular degeneration) ▪ cardiac (e.g., myocardial infarction, coronary insufficiency) ▪ pulmonary (e.g., emphysema, fibrosis) ▪ endocrine (e.g., diabetes) ▪ motor (e.g., arthritis, neuromuscular disease) ▪ neurologic (e.g., seizures) ▪ sleep (e.g., obstructive sleep apnea) ▪ mental/emotional health (e.g., depression, schizophrenia)	121.	N/A
6. Evaluate drug toxicology screening results when available and order a second more specific test as indicated	122.	N/A
7. Screen drivers with a hypertension diagnosis for target-organ damage including heart failure, left ventricular hypertrophy, stroke, retinopathy, and nephropathy	123.	N/A
8. Refer a driver with limitations in extremity movement for an on-road performance evaluation and/or skill performance evaluation	124.	N/A
D. Documentation		
1. Comment about each health history item marked "yes" on medical examination report regarding a driver's ability to operate a commercial motor vehicle	125.	ALL
2. Cite		
a. information about the driver's performance of driving and non-driving job tasks provided by the employer or testing entity	126.	N/A
b. Skills Performance Exam (SPE) results	127.	
c. an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision waiver study program	128.	N/A
3. Record medications and supplements a driver is taking to potentially identify a disqualifying effects or medical conditions	129.	ALL
4. Record		
a. vision measurements in Snellen comparable values	130.	ALL
b. hearing test results in ANSI standard units as indicated	131.	ALL
5. Record whether a driver's		
a. vision performance qualifies only when wearing corrective lenses	132.	ALL
b. hearing performance qualifies only when wearing a hearing aid	133.	ALL
6. Record drug toxicology screening results when available	134.	ALL
7. Integrate test results as available with other information about the driver including		
a. audiometrics	135.	ALL
b. electrocardiogram	136.	10
c. cardiac stress test	137.	NONE
d. chest radiograph	138.	NONE
e. vascular study	139.	NONE
f. pulmonary function test	140.	NONE
g. oximetry or arterial blood gas analysis	141.	NONE
h. blood (e.g., creatinine, electrolytes, toxicology, lipids)	142.	
i. urinalysis (e.g., specific gravity, protein, blood, and glucose)	143.	ALL

Comment [R13]: One group suggested deleting this task

Comment [R14]: Consider the alternative statement:
Summarize each affirmatively marked health history item with regard to diagnosis, onset date, medications, and current limitations

Comment [R15]: One group suggested deleting this task

8. Integrate a specialist's evaluation with other information about the driver	144.	N/A
9. Cite findings from medical specialists supporting a driver's qualifications under a limited exemption for diabetes or vision	145.	N/A
10. Explain how and why a physical impairment interferes with a driver's ability to perform normal tasks associated with the operation of a commercial motor vehicle	146.	ALL
11. Compare a driver's limitations to safety-sensitive driving and non-driving requirements including	147.	
a. abdominal disorders including hernias	148.	1,2,3,4,6, 7,8,9,10
b. spine movement	149.	ALL
c. prosthetic/orthotic device used during driving	150.	
12. Describe a driver's qualifications when the driver has a physical condition that may otherwise disqualify him/her including a		
a. prosthetic/orthotic device used during driving	151.	ALL
b. road test of driving skills	152.	ALL
13. Summarize each diagnosis, onset date, medications and current limitations for the driver's medical record	153.	ALL
14. Evaluate the nature and severity of diagnosed conditions including the degree of limitation, likelihood of progression, and potential for sudden incapacitation for rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disorders	154.	ALL
15. Explain reasons supporting a driver certification decision when published FMCSA medical guidelines indicate disqualification (e.g., practice standards have changed since guidelines were published)	155.	
a. supporting a driver certification decision when published FMCSA medical guidelines indicate disqualification (e.g., practice standards have changed since guidelines were published)	156.	ALL
b. a driver was only certified for intrastate work and appropriately mark a driver's medical examination report	157.	ALL
II. Driver's Physical Qualifications		
A. Counseling		
1. Emphasize to a driver who is taking medications or supplements he/she should comprehend associated cautions, warnings, and direction labels	158.	ALL
2. Explain to a driver the consequences of non-compliance with a care plan	159.	
3. Impress on a driver who requires medication and/or treatment the importance of complying with the care plan including use of medications, proper timing, storage conditions for medications	160.	ALL
4. Advise a driver regarding side effects and interactions of medications, including those acquired over the counter, that could negatively affect his/her driving		
a. side effects and interactions of prescription and non-prescription medications and supplements, including those acquired over the counter, that could negatively affect his/her driving	161.	ALL
b. timing of medications, particularly multiple medications	162.	
c. use of any medications that contain narcotics relative to driving responsibilities and random drug testing	163.	ALL

Comment [R16]: One group suggested deleting this task and the next task

Comment [R17]: One group suggested deleting tasks 12b, 13, and 14, and moving task 12a to 11d

Comment [R18]: One group suggested the additional text replaces 15a and 15b

Comment [R19]: One group suggested deleting this task

Comment [R20]: Suggestion to WIPT: choose the "impress" or "advise" task below because they seem redundant

Comment [R21]: One group suggested the additional text replaces tasks 4a through 4d

d. potential interactions of anticoagulant medications with other medications and diet, and the risk of bleeding if traumatized	164.	ALL
5. Inform a driver candidate who has had a recent medical event regarding the certification process and the benefit of delaying certification in some cases including ▪ the immediate post-operative period ▪ vision disability (e.g., retinopathy, macular degeneration) ▪ a cardiac event (e.g., myocardial infarction, coronary insufficiency) ▪ a chronic pulmonary exacerbation (e.g., emphysema, fibrosis) ▪ endocrine dysfunction (e.g., diabetes) ▪ motor challenges (e.g., arthritis, neuromuscular disease) ▪ a neurologic event (e.g., seizures) ▪ a sleep event (e.g., obstructive sleep apnea) mental health dysfunction (e.g., depression, bipolar)	165.	
6. Advise a driver candidate who		
a. has asthma about potential irritants in the work environment that could exacerbate the condition	166.	N/A
b. had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	167.	N/A
c. just began taking anticoagulant medication to stabilize for at least 3 months before seeking medical certification	168.	N/A
d. has diabetes about glucose monitoring frequencies and the minimum threshold while driving	169.	N/A
e. has experienced a seizure attributed to a non-epileptic cause to defer certification until a complete recovery can be verified	170.	N/A
f. was treated for obstructive sleep apnea to delay medical qualification for a month and establish a compliance pattern with the treatment plan	171.	N/A
7. Cite side effects and interactions of medications required to control mental disorders relative to cognitive demands of driving	172.	ALL
8. Administer Skill Performance Evaluation (SPE) cases		
a. advise a driver who		
1) has a physical impairment, but otherwise could be qualified to drive, about the SPE application process	173.	N/A
2) qualifies with an SPE certificate to retain a copy while on duty	174.	N/A
b. advise a motor carrier of its responsibilities to evaluate a driver on equipment the driver typically uses	175.	N/A
9. Explain to a driver the way fatigue, lack of sleep, undesirable diet, emotional conditions and stress while driving, and other illnesses can compound comorbid conditions	176.	ALL
10. Emphasize to a driver who qualifies		
a. with contact lenses he/she should carry a pair of glasses	177.	
b. with a hearing aid he/she should possess a spare power source for the device	178.	N/A
c. under the insulin waiver program, he/she should		
1) possess a rapidly absorbable form of glucose while driving	179.	N/A
2) self-monitor blood glucose one-hour before driving and at least once every four hours while driving	180.	N/A
3) comply with all conditions of his/her waiver	181.	

Comment [R22]: Consider whether task 5 could replace tasks 6a through 6f because they cover redundant content

Comment [R23]: Two groups suggested deleting tasks 6a through 6f

Comment [R24]: Two groups suggested deleting this task

4) plan to submit glucose monitoring logs for each annual recertification	182.	N/A
B. Risk Assessment in Borderline Cases		
1. Evaluate a driver's job responsibilities		
a. review information from a driver's job description	183.	
b. distinguish among drivers who primarily work in (1) turn around/short relay, (2) straight through haul/cross-country, and (3) team driving settings	184.	ALL
c. describe typical maneuvers of a driver's ▪ hand while performing precision prehension and power grasping ▪ arm, foot, or leg associated with vehicle operation	185.	N/A[a]
d. discuss based on patient history and examination findings, physical requirements required to regularly perform the following while maintaining control over the vehicle ▪ manipulate an oversized steering wheel ▪ shift through several gears using a manual transmission	186.	N/A
e. describe physical requirements required to perform the following after a prolonged period of relative inactivity ▪ lift a minimum of XX lbs. ▪ couple and uncouple trailers from a tractor ▪ load or unload several thousand pounds of freight ▪ install and remove tire chains ▪ manipulate and secure tarpaulins that cover open trailer ▪ move one's own body through space while climbing ladders; bending, stooping, and crouching; entering and exiting the cab	187.	N/A
f. list cognitive requirements required of a driver to ▪ plan a travel route ▪ inspect the operating condition of a tractor and/or trailer ▪ monitor and adjust to complex driving situation ▪ maneuver through crowded areas ▪ quickly alter the course of a vehicle to avoid trouble	188.	N/A
2. Anticipate as indicated by a driver's history		
a. adverse health effects associated with rotating work schedules and irregular sleep patterns	189.	N/A
b. long-term effects of fatigue associated with extended work hours without breaks	190.	N/A
c. risk factors associated with common dietary choices available to drivers	191.	N/A
d. stressors likely associated with extended time away from a driver's social support system	192.	N/A
e. anticipate short- and long-term health effects of stress from ▪ tight pickup and delivery schedules ▪ irregular work, rest, and eating patterns/dietary choices ▪ adverse road, weather, and traffic conditions ▪ exposure to temperature extremes, vibration, and noise ▪ transporting passengers or hazardous products	193.	N/A
3. Judge for what duration a documented medical condition will likely remain stable and unlikely to result in sudden incapacitation	194.	ALL
4. Evaluate the likely rate of progress for a documented neurological limitation and likelihood of sudden incapacitation	195.	ALL

Comment [R25]: WIPT should consider whether information about a specific job should be considered as a part of the certification process or should a driver be certified for general CMV operation

Comment [R26]: One group suggested deleting this task

Comment [R27]: One group suggested deleting this task and the next 2 tasks

Comment [R28]: Find a reference

Comment [R29]: Consider deleting this task and the next task

Comment [R30]: WIPT should consider whether the suggested additional text for this task might replace the next task

5. Compare a driver's blood pressure to Stage 1, 2, and 3 hypertension guidelines for guidance regarding the recertification interval	196.	ALL
6. Evaluate results of information (e.g., stress tests, neurological examinations) provided or requested		
a. resting and stress electrocardiograms from a driver recovering from an acute cardiovascular event	197.	ALL
b. ejection fraction measurements for a driver with cardiovascular disease	198.	N/A
c. a complete neurological examination for a driver with a history of seizures who seeks reinstatement	199.	N/A
7. Confirm for a driver who had a cardiovascular insufficiency event, depending on the nature of the event and subsequent procedures performed		
a. a normal resting and stress electrocardiogram	200.	N/A
b. lack of residual complications or physical limitations	201.	N/A
c. safe driving is still likely in spite of side effects and interactions of medications he or she must take	202.	N/A
8. Confirm a driver who has asthma complies with the care and monitoring plan and has the disease under adequate control	203.	N/A
9. Relate a history of atrial fibrillation/flutter, stroke, and use of an anticoagulant to the risk of sudden incapacitation	204.	N/A
10. Integrate medical findings for a driver qualified under a limited exemption for diabetes or vision	205.	N/A
11. Evaluate coagulation monitoring results for a driver who regularly takes a medication that affects coagulation	206.	N/A
12. Evaluate drug (e.g., digoxin, theophylline) level monitoring results	207.	
13. Determine whether a driver candidate with a history of a seizure disorder also had a sufficiently long seizure-free history to support certification	208.	N/A
14. Administer limited exemptions for drivers seeking certification in intra-city zones	209.	N/A
15. Review Skill Performance Evaluation (SPE) cases		
a. identify terms, conditions, and limitations set forth in a driver's SPE Certificate	210.	N/A
b. ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	211.	N/A
16. Verify whether a driver with diabetes, who relies only on an oral hypoglycemic drug or diet and exercise, has the disease under control	212.	ALL
17. Confirm a driver who uses a controlled substance received a prescription from a licensed medical practitioner along with advice relative to side effects on his/her ability to drive	213.	N/A

Comment [MC31]: Regroup by system where appropriate.

Comment [R32]: The suggested additional text may replace 6a through 6c

Comment [R33]: Consider this alternative text:
Review and verify a cardiologist's recommendations for a driver who had a cardiovascular insufficiency event

Comment [R34]: Consider this alternative text:
Determine whether a driver candidate with a history of an epileptic seizure also had a sufficiently long seizure-free history off medication to permit certification

Comment [R35]: One group suggested deleting this task

Comment [R36]: OR "a scheduled medication"

18. Evaluate a driver's documentation of risk assessments including ▪ a post-operative report ▪ vision testing results (e.g., retinopathy, macular degeneration) ▪ cardiac evaluation (e.g., myocardial infarction, coronary insufficiency) ▪ pulmonary measurements (e.g., emphysema, fibrosis) ▪ endocrine function evaluation (e.g., diabetes) ▪ motor evaluation (e.g., arthritis, neuromuscular disease) ▪ neurologic evaluation (e.g., seizures) ▪ sleep study results (e.g., obstructive sleep apnea) ▪ mental health evaluation (e.g., depression, bipolar)	214.	
a. functional reserve and risk of arrhythmias when he/she has a diagnosis of coronary artery disease	215.	N/A
b. ejection fraction by echocardiogram after a driver had a myocardial infarction	216.	N/A
19. Review results of information provided by the treating physician for potentially hazardous medications (e.g., adderall, dextromethorphan) and/or alcohol use	217.	
20. Review results of SAP evaluations for alcohol and drug use and/or abuse	218.	
a. alcoholism has completed counseling and treatment to the point of full recovery	219.	N/A
b. prohibited drug use shows evidence he/she is now free from such use	220.	N/A
C. Absolute Disqualification Factors		
1. Summarize absolute certification standards for which no medical examiner discretion is allowed	221.	ALL
2. Establish when any of the following parameters for a driver fall below minimum corrected vision standards ▪ acuity ▪ peripheral field of view ▪ color identification	222.	ALL
3. Establish when		ALL
a. hearing measurements with or without a hearing aid fall below minimum standards	223.	
b. a driver is taking methadone	224.	
c. a driver has diabetes requiring insulin control	225.	ALL
d. the medical history indicates a diagnosis of epilepsy	226.	ALL
e. a driver is dependent on a controlled substance including a narcotic, amphetamine, or other habit-forming drug without treatment from the treating physician	227.	ALL
D. Relative Disqualification Factors		
1. Establish when a driver's asthma symptoms are inadequately controlled	228.	ALL
2. Establish clear evidence of emotional instability including documented diagnoses of schizophrenia, psychoses, paranoia, or neuroses	229.	ALL
3. Evaluate evidence from specialists and testing that could disqualify a driver including		
a. visual disorders	230.	
b. signs and symptoms of cardiac disorders	231.	

Comment [R37]: This task was expanded and may replace 18 a and 18b

Comment [R38]: Text in this statement may be sufficient such that 20a and 20b are redundant

c. deep vein thrombosis and pulmonary emboli	232.	ALL
d. anticoagulant use and cerebrovascular disease or advanced age	233.	ALL
e. hypoxemia or cough syncope associated with acute and chronic pulmonary diseases	234.	ALL
f. an abdominal aneurysm	235.	ALL
g. endocrine disorders	236.	ALL
h. neuromuscular diseases (e.g., motor neuron disease, muscular dystrophy, multiple sclerosis)	237.	ALL
i. sleep disorders	238.	
j. signs of alcoholism	239.	ALL
k. unfavorable SAP report	240.	
l. psychiatric disorders	241.	
E. Certification Outcomes and Intervals		
1. Disqualify a driver for medical reasons from any commercial motor vehicle driving	242.	
a. document the reason(s) for the disqualification and/or referral	243.	
b. advise a driver of the reasons for a disqualification decision	244.	
c. state whether and how reinstatement could be possible	245.	
d. refer a driver with a controllable condition to a specialist for consultation and treatment	246.	
2. Limit a driver to intrastate commercial motor vehicle driving	247.	ALL
3. Certify a driver for an interval appropriate to risks associated with his or her medical information	248.	ALL
4. Certify a driver with or without restrictions appropriate to his or her medical information including ▪ vision correction with lenses or surgery ▪ vision and diabetes grandfathering ▪ wearing a hearing aid ▪ accompanied by a waiver or exemption, which the medical examiner identifies ▪ accompanied by a Skill Performance Evaluation Certificate	249.	ALL
5. Advise a driver qualified		
a. under a time-restriction for hypertension to plan for 3-, 6-, or 12-month recertification as appropriate	250.	
b. under a limited exemption for diabetes or vision to plan for annual medical recertification	251.	ALL
c. with diabetes of information required for subsequent recertification	252.	
d. while taking anticoagulant medication to plan for annual medical recertification	253.	ALL
e. without limitations or restrictions to seek recertification in two years	254.	ALL
6. Complete a driver's medical examination report and card ▪ ensure the form includes the examiner's name, examination date, office address, and telephone number ▪ ensure the driver signs the examination report and card	255.	ALL

APPENDIX B

Role Delineation Survey

U.S. Department of Transportation

Federal Motor Carrier Safety Administration

December 2006

Dear Medical Examiner,

The Federal Motor Carrier Safety Administration's (FMCSA) mission is to reduce crashes, injuries, and fatalities involving large trucks and buses. The mission of the FMCSA Medical Program is to protect the safety of America's roadways by ensuring commercial motor vehicle drivers engaged in interstate commerce are physically qualified. Medical examiners of these drivers are an integral part of the success of the FMCSA Medical Program.

FMCSA will soon propose a National Registry of Certified Medical Examiners (NRCME) to improve highway safety. The National Registry program will produce trained, certified FMCSA medical examiners who can effectively determine if a commercial motor vehicle driver's health meets FMCSA standards. More information on the program can be found on the Web site at http://www.nrcme.fmcsa.dot.gov.

Medical examiners, like you, from across the Nation are being surveyed about the tasks they perform while examining commercial motor vehicle drivers. Survey results will play an essential role in developing a national certification test and a training curriculum.

Your response is needed to ensure the sample represents your personal experience, expertise, work environment, and State.

I want to thank you for taking time to respond to this very important survey.

Sincerely yours,

Rose A. McMurray
Associate Administrator for
Policy and Program Development

Do Not Place Staple Below This Line

OMB Control No.: 2126-0039
Expire: 10/31/2009

National Registry of Certified Medical Examiners
Federal Motor Carrier Safety Administration

Role Delineation Study for FMCSA Medical Examiners

SECTION 1:
Survey Directions

ONLY FMCSA MEDICAL EXAMINERS SHOULD COMPLETE THE SURVEY

An FMCSA medical examiner is a licensed, certified, or registered healthcare professional (APN, DC, DO, MD, PA) who is knowledgeable about driver qualification standards and guidelines, and performs driver certification examinations with awareness of tasks and conditions under which CMV drivers work. The medical examiner evaluates physical, psychological, and emotional qualifications of CMV drivers while adhering to FMCSA standards, medical advisory criteria, and guidelines to determine a driver's fitness.

HANDLING THE SURVEY

- Please do not bend or fold the survey
- Place the completed survey in the enclosed return envelope and mail to Applied Measurement Professionals, Inc. no later than **February 18, 2007**

RATING TASKS

Give one rating for each task. Base your ratings on your own experience. Please use the rating scale below to indicate whether you perform each task and how important it is if you do:

IMPORTANCE SCALE

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?

4 = High importance
3 = Above average importance
2 = Below average importance
1 = Low importance
0 = Never performed

EXAMPLE: The following box shows how one might use the rating scale to evaluate the first two tasks.

SECTION 2:
FMSCA Medical Examiner
Task List

- Use a soft, black lead pencil to fill in each response
- Mark the zero if you have never performed a task
- Rate the importance of a task you have performed
- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low → High
I. DRIVER'S MEDICAL INFORMATION			
1. Verify the identity of the driver	1	0	1 2 ● 4
The example response indicates this task is above average in importance			
2. Ensure the driver signs the driver's statement about health history	2	●	1 2 3 4
The example response indicates this task is never performed			

NOTE: These ratings are only for illustrative purposes and do not reflect actual ratings.

If you have any questions about the instructions, any of these tasks,
or need assistance in completing this survey, please call:

J. Michael Clark, III, MS
Research Associate
Applied Measurement Professionals, Inc.
(913) 495-4466

SECTION 2:
FMSCA Medical Examiner
Task List

- Use a soft, black lead pencil to fill in each response
- Mark the zero if you have never performed a task
- Rate the importance of a task you have performed
- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low → High
I. DRIVER'S MEDICAL INFORMATION			
A. Identification and History			
1. Verify the identity of the driver	1	0	1 2 3 4
2. Ensure the driver signs the driver's statement about health history	2	0	1 2 3 4
3. Identify, query, and note issues in a driver's medical record and / or health history as available, which may include			
a. specifics regarding any affirmative responses in the history	3	0	1 2 3 4
b. any illness, surgery, or injury in the last five years	4	0	1 2 3 4
c. any other hospitalizations or surgeries	5	0	1 2 3 4
d. any recent changes in health status	6	0	1 2 3 4
e. whether he / she has any medical conditions or current complaints	7	0	1 2 3 4
f. any incidents of disability / physical limitations	8	0	1 2 3 4
g. limitations placed during prior FMCSA exams	9	0	1 2 3 4
h. current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying	10	0	1 2 3 4
i. his or her use of recreational / addictive substances (e.g., nicotine, alcohol, inhalants)	11	0	1 2 3 4
j. weight disorders (e.g., unexplained loss or gain, obesity)	12	0	1 2 3 4
k. disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, macular degeneration, monocular vision)	13	0	1 2 3 4
l. disorders of the ears (e.g., hearing loss, hearing aids, vertigo, Meniere's, tinnitus, implants)	14	0	1 2 3 4
m. cardiac symptoms (e.g., syncope, dyspnea, chest pain, palpitations)	15	0	1 2 3 4
n. cardiovascular diseases (e.g., hypertension, congestive heart failure, myocardial infarction, coronary insufficiency, or thrombosis)	16	0	1 2 3 4
o. hematologic disorders (e.g., bleeding disorders, anemia, cancer, organ transplant history)	17	0	1 2 3 4
p. pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	18	0	1 2 3 4
q. pulmonary diseases (e.g., asthma, chronic lung disorders, tuberculosis, previous pulmonary embolus, pneumothorax)	19	0	1 2 3 4
r. sleep disorders (e.g., sleep apnea, narcolepsy, insomnia, daytime sleepiness, loud snoring, testing and / or treatments)	20	0	1 2 3 4
s. gastrointestinal disorders (e.g., pancreatitis, ulcers, ulcerative colitis, cirrhosis, hepatitis, irritable bowel syndrome, hernias)	21	0	1 2 3 4
t. genitourinary disorders (e.g., polycystic, nephrotic syndrome, kidney stones, renal failure, hernias)	22	0	1 2 3 4
u. diabetes mellitus	23	0	1 2 3 4
• weight loss • duration on current medications • medication side effects • complications from diabetes • availability of emergency glucose supply • presence and frequency of hypoglycemic / hyperglycemic episodes / reactions			
v. other endocrine disorders (e.g., thyroid disorders, interventions / treatment)	24	0	1 2 3 4
w. musculoskeletal disorders (e.g., amputations, arthritis, spinal surgery)	25	0	1 2 3 4
x. neoplastic disorders (e.g., leukemia; brain, bone, breast, and lung cancer)	26	0	1 2 3 4
y. substance use and abuse (e.g., alcohol, narcotics, illicit or legal drugs)	27	0	1 2 3 4
z. neurologic disorders (e.g., loss of consciousness, seizures, stroke / TIA, headaches / migraines, numbness / weakness)	28	0	1 2 3 4
aa. psychiatric disorders (e.g., schizophrenia, depression, anxiety, bipolar, ADHD, interventions / treatment)	29	0	1 2 3 4
bb. other conditions that could impair a driver's ability to safely function	30	0	1 2 3 4

SECTION 2: FMSCA Medical Examiner Task List

- Use a soft, black lead pencil to fill in each response
- Mark the zero if you have never performed a task
- Rate the importance of a task you have performed
- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low High
B. Physical Examination and Evaluation			
1. Ensure the driver is properly clothed for the physical examination	31.	0	1 2 3 4
2. Record height and weight, and note whether a driver is overweight or underweight	32.	0	1 2 3 4
3. Examine the driver's eyes and note			
a. distant acuity in each and both eyes (Snellen comparable values)	33.	0	1 2 3 4
b. whether corrective lenses are required to meet the standard	34.	0	1 2 3 4
c. horizontal field of vision in each eye	35.	0	1 2 3 4
d. color recognition	36.	0	1 2 3 4
e. presence or absence of monocular vision	37.	0	1 2 3 4
f. reactivity to light and pupillary equality	38.	0	1 2 3 4
g. evidence of nystagmus and exophthalmos	39.	0	1 2 3 4
h. evaluation of extraoccular movements	40.	0	1 2 3 4
i. fundoscopic examination results	41.	0	1 2 3 4
4. Examine the driver's ears and note			
a. abnormalities of the ear canal and tympanic membrane	42.	0	1 2 3 4
b. whisper test and / or audiometric results (in ANSI standard units) as indicated	43.	0	1 2 3 4
c. presence or absence of a hearing aid and whether required to meet the standard	44.	0	1 2 3 4
5. Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing	45.	0	1 2 3 4
6. Examine the driver's neck and note			
a. range of motion	46.	0	1 2 3 4
b. soft tissue palpation / examination (e.g., lymph nodes, thyroid gland)	47.	0	1 2 3 4
7. Examine the driver's heart			
a. chest inspection (e.g., surgical scars, pacemaker / IAD)	48.	0	1 2 3 4
b. thrills, murmurs, extra sounds, and enlargement	49.	0	1 2 3 4
c. blood pressure and pulse (rate and rhythm)	50.	0	1 2 3 4
d. additional signs of disease (e.g., edema, bruits, diaphoresis, distended neck veins)	51.	0	1 2 3 4
8. Examine the driver's lungs, chest, and thorax, excluding breasts, and note			
a. respiratory rate and pattern	52.	0	1 2 3 4
b. abnormal breath sounds	53.	0	1 2 3 4
c. abnormal chest wall configuration / palpation	54.	0	1 2 3 4
d. scars	55.	0	1 2 3 4
9. Examine the driver's abdomen, and note			
a. surgical scars	56.	0	1 2 3 4
b. an enlarged liver or spleen	57.	0	1 2 3 4
c. abnormal masses or bruits / pulsation	58.	0	1 2 3 4
d. abdominal tenderness	59.	0	1 2 3 4
e. hernias (e.g., inguinal, umbilical, ventral, femoral)	60.	0	1 2 3 4
10. Examine the driver's spine and note			
a. surgical scars and deformities	61.	0	1 2 3 4
b. tenderness and muscle spasm	62.	0	1 2 3 4
c. loss in range of motion and painful motion	63.	0	1 2 3 4
d. kyphosis, scoliosis, or other spinal deformities	64.	0	1 2 3 4
11. Examine the driver's extremities and note			
a. gait, mobility, and posture while bearing his or her weight; limping or signs of pain	65.	0	1 2 3 4
b. loss, impairment, or use of orthosis	66.	0	1 2 3 4
c. deformities, atrophy, weakness, paralysis, surgical scars	67.	0	1 2 3 4
d. elbow and shoulder strength, function, and mobility	68.	0	1 2 3 4

SECTION 2: FMSCA Medical Examiner Task List

- Use a soft, black lead pencil to fill in each response
- Mark the zero if you have never performed a task
- Rate the importance of a task you have performed
- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low → High
e. handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	69	0	1 2 3 4
f. varicosities, skin abnormalities, and cyanosis, clubbing, or edema	70	0	1 2 3 4
g. leg length discrepancy; lower extremity strength, motion, and function	71	0	1 2 3 4
12. Examine the driver's neurologic status and note			
a. impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)	72	0	1 2 3 4
b. gait disorders	73	0	1 2 3 4
c. sensory or positional abnormalities	74	0	1 2 3 4
d. tremor	75	0	1 2 3 4
e. radicular signs	76	0	1 2 3 4
f. reflexes (e.g., asymmetric deep-tendon, normal / abnormal patellar and Babinski	77	0	1 2 3 4
13. Test the driver's urine and note specific gravity, protein, blood, and glucose	78	0	1 2 3 4
14. Examine the driver's mental status and note			
a. comprehension and interaction	79	0	1 2 3 4
b. cognitive impairment (e.g., orientation, intellect, memory, obsessions, circumstantial / tangential speech)	80	0	1 2 3 4
c. signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	81	0	1 2 3 4
C. Diagnostic Tests and / or Referrals			
1. Obtain additional information when indicated by			
a. audiometrics	82	0	1 2 3 4
b. cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	83	0	1 2 3 4
c. blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	84	0	1 2 3 4
d. chest radiograph	85	0	1 2 3 4
e. respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	86	0	1 2 3 4
f. sleep studies	87	0	1 2 3 4
g. drug level monitoring (e.g., digoxin, theophylline)	88	0	1 2 3 4
h. other tests	89	0	1 2 3 4
2. Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider	90	0	1 2 3 4
• vision (e.g., retinopathy, macular degeneration)			
• cardiac (e.g., myocardial infarction, coronary insufficiency, blood pressure control)			
• pulmonary (e.g., emphysema, fibrosis)			
• endocrine (e.g., diabetes)			
• musculoskeletal (e.g., arthritis, neuromuscular disease)			
• neurologic (e.g., seizures)			
• sleep (e.g., obstructive sleep apnea)			
• mental / emotional health (e.g., depression, schizophrenia)			
3. Refer a driver			
a. with limitations in extremity movement for an on-road performance evaluation and / or skill performance evaluation	91	0	1 2 3 4
b. for conditions not directly related to certification, but detected during the examination	92	0	1 2 3 4
D. Documentation of Ancillary Information			
1. Record / include results as available with other information about the driver, which may include			
a. audiometrics	93	0	1 2 3 4
b. cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	94	0	1 2 3 4

SECTION 2:
FMSCA Medical Examiner Task List

- Use a soft, black lead pencil to fill in each response
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- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low High
c. blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	95	0	1 2 3 4
d. chest radiograph	96	0	1 2 3 4
e. respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	97	0	1 2 3 4
f. sleep studies	98	0	1 2 3 4
g. drug level monitoring (e.g., digoxin, theophylline)	99	0	1 2 3 4
h. other tests	100	0	1 2 3 4
i. treating physician's work release	101	0	1 2 3 4
2. Integrate a specialist's evaluation with other information about the driver	102	0	1 2 3 4
3. Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption	103	0	1 2 3 4
4. Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's / optometrist's report as required	104	0	1 2 3 4
5. Include if available			
a. a current skill performance evaluation certificate	105	0	1 2 3 4
b. documentation of intracity zone exemption	106	0	1 2 3 4
6. Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with			
a. alcoholism who completed counseling and treatment to the point of full recovery	107	0	1 2 3 4
b. prohibited drug use who shows evidence he or she is now free from such use	108	0	1 2 3 4
II. DETERMINATION OF DRIVER'S QUALIFICATIONS AND DISPOSITION			
A. Health Education Counseling			
1. Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider	109	0	1 2 3 4
2. Advise a driver			
a. regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g., antihistamines, cold and cough medications) that could negatively affect his or her driving	110	0	1 2 3 4
b. that fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving	111	0	1 2 3 4
c. with contact lenses that he or she should carry a pair of glasses while driving	112	0	1 2 3 4
d. with a hearing aid that he / she should possess a spare power source for the device while driving	113	0	1 2 3 4
e. who has had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	114	0	1 2 3 4
f. who has diabetes about glucose monitoring frequencies and the minimum threshold while driving	115	0	1 2 3 4
g. with a diabetes exemption, that he / she should			
1) possess a rapidly absorbable form of glucose while driving	116	0	1 2 3 4
2) self-monitor blood glucose one hour before driving and at least once every four hours while driving	117	0	1 2 3 4
3) comply with each condition of his / her exemption	118	0	1 2 3 4
4) plan to submit glucose monitoring logs for each annual recertification	119	0	1 2 3 4
3. Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include	120	0	1 2 3 4
• the immediate post-operative period			
• a vision disability (e.g., retinopathy, macular degeneration)			
• a cardiac event (e.g., myocardial infarction, coronary insufficiency)			
• a chronic pulmonary exacerbation (e.g., emphysema, fibrosis)			

SECTION 2:
FMSCA Medical Examiner
Task List

- Use a soft, black lead pencil to fill in each response
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- Rate the importance of a task you have performed
- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low → High
• uncontrolled hypertension			
• endocrine dysfunctions (e.g., diabetes)			
• musculoskeletal challenges (e.g., arthritis, neuromuscular disease)			
• a neurologic event (e.g., seizures, stroke, TIA)			
• a sleep disorder (e.g., obstructive sleep apnea)			
• mental health dysfunctions (e.g., depression, bipolar)			
B. Risk Assessment			
1. Consider a driver's ability to	121	0	1 2 3 4
• couple and uncouple trailers from a tractor			
• load or unload several thousand pounds of freight			
• install and remove tire chains			
• manipulate and secure tarpaulins that cover open trailer			
• move one's own body through space while climbing ladders; bending, stooping, and crouching; entering and exiting the cab			
• manipulate an oversized steering wheel			
• shift through several gears using a manual transmission			
• perform precision prehension and power grasping			
• use arms, feet, and legs during CMV operation			
2. Review Skill Performance Evaluation (SPE) cases			
a. identify terms, conditions, and limitations set forth in a driver's SPE Certificate	122	0	1 2 3 4
b. ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or ar	123	0	1 2 3 4
3. Consider a driver's cognitive ability to	124	0	1 2 3 4
• plan a travel route			
• inspect the operating condition of a tractor and / or trailer			
• monitor and adjust to a complex driving situation			
• maneuver through crowded areas			
• quickly alter the course of vehicle to avoid trouble			
4. Consider general health and wellness factors such as			
a. adverse health effects associated with rotating work schedules and irregular sleep patterns	125	0	1 2 3 4
b. long-term effects of fatigue associated with extended work hours without breaks	126	0	1 2 3 4
c. risk factors associated with common dietary choices available to drivers	127	0	1 2 3 4
d. stressors likely associated with extended time away from a driver's social support system	128	0	1 2 3 4
e. short- and long-term health effects of stress from	129	0	1 2 3 4
• tight pickup and delivery schedules			
• irregular work, rest, and eating patterns / dietary choices			
• adverse road, weather, and traffic conditions			
• exposure to temperature extremes, vibration, and noise			
• transporting passengers or hazardous products			
5. Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment	130	0	1 2 3 4
6. Consider the rate of progression, degree of control, and likelihood of sudden incapacitation for documented conditions (e.g., cardiovascular, neurologic, respiratory, musculoskeletal)	131	0	1 2 3 4
7. Support the rationale for using FMCSA guidelines that have not been published in regulations yet	132	0	1 2 3 4

SECTION 2:
FMSCA Medical Examiner Task List

- Use a soft, black lead pencil to fill in each response
- Mark the zero if you have never performed a task
- Rate the importance of a task you have performed
- Erase cleanly any response you choose to change

How important is this task for competent performance of medical examinations for CMV drivers to minimize public risk of injuries and fatalities due to CMV crashes?	TASK #	Never Performed	IMPORTANCE Low → High
C. Certification Outcomes and Intervals			
1. Apply nondiscretionary certification standards to disqualify a driver			
a. with a history of epilepsy	133	0	1 2 3 4
b. with diabetes requiring insulin control (unless accompanied by an exemption)	134	0	1 2 3 4
c. when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption	135	0	1 2 3 4
d. when hearing measurements with or without a hearing aid fall below minimum standards.	136	0	1 2 3 4
2. Disqualify a driver who			
a. is currently taking methadone	137	0	1 2 3 4
b. has a current clinical diagnosis of alcoholism	138	0	1 2 3 4
c. uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician	139	0	1 2 3 4
3. Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists	140	0	1 2 3 4
4. Document the reason(s) for the disqualification and / or referral	141	0	1 2 3 4
5. Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified	142	0	1 2 3 4
6. Certify a driver for an appropriate interval	143	0	1 2 3 4
7. Indicate certification status, which may require	144	0	1 2 3 4
• waiver / exemption, which the medical examiner identifies			
• wearing corrective lenses			
• wearing a hearing aid			
• a Skill Performance Evaluation Certificate			
8. Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition	145	0	1 2 3 4
9. Complete a medical examination report and medical certificate / card	146	0	1 2 3 4
• ensure use of currently required examination form			
• ensure the form includes the examiner's name, examination date, office address, and telephone number			
• ensure the driver signs the medical certificate / card			

Thank you for rating these tasks. Please proceed to the next page to evaluate the adequacy of the task inventory in describing the role of a medical examiner.

1. How well did this survey cover critical tasks for the role of an FMSCA medical examiner?

○ Inadequately ○ Adequately

If inadequately, then specify tasks you perceive should be added below:

_____

_____

_____

_____

_____

_____

_____

_____

_____

2. What percentage of questions on a certification examination for medical examiners do you think should come from each of the following content areas?

Ensure the sum of your percentage values is equal to 100.

%	**Identification and History**
%	**Physical Examination and Evaluation**
%	**Diagnostic Tests and / or Referrals**
%	**Documentation of Ancillary Information**
%	**Health Education Counseling**
%	**Risk Assessment**
%	**Certification Outcomes and Intervals**
100%	**Total**

Please proceed to the next page to provide information about your background. Individual responses will be kept confidential.

SECTION 3: Background Information

DIRECTIONS: Please answer the following questions about your background.

Select only one response to each item unless otherwise directed.

1. Which of the following is your profession?

   ① Advanced Practice Nurse
   ② Doctor of Chiropractic
   ③ Doctor of Osteopathic Medicine
   ④ Medical Doctor
   ⑤ Physician Assistant
   ⑥ Other _____

2. For how many years have you been working in your current profession?

   Write numbers over each blank space and fill in the corresponding bubble below.

   — —

   ⓪ ⓪
   ① ①
   ② ②
   ③ ③
   ④ ④
   ⑤ ⑤
   ⑥ ⑥
   ⑦ ⑦
   ⑧ ⑧
   ⑨ ⑨

3. Which of the following best describes your primary job function?

   ① Administration
   ② Clinical
   ③ Consultant
   ④ Education
   ⑤ Research
   ⑥ Other _____

4. In what type of healthcare environment do you work?

   ① Academic
   ② Group practice
   ③ Hospital
   ④ Industry / on-site
   ⑤ Military
   ⑥ Multi-specialty
   ⑦ Solo practice
   ⑧ Urgent care
   ⑨ Other _____

5. Is occupational health your primary work responsibility?

   ① No
   ② Yes

6. Have you had training in occupational health?

   ① No
   ② Yes

7. Have you attended a training course for CMV driver physical examinations?

   ① No (Skip to question 9)
   ② Yes

8. If yes, did you take your course from any of the following organizations? *(select all that apply)*

   ① American Academy of Physician Assistants National Conference
   ② American College of Occupational and Environmental Medicine
   ③ Concentra
   ④ Intermountain Heath Care
   ⑤ National University of Health Sciences
   ⑥ Other _____

9. To what materials do you typically refer when performing a physical exam for CMV drivers? *(select all that apply)*

General References

① Consensus reports from specialty organizations
② Federal Register notices
③ Hartenbaum: The DOT Medical Exam
④ Wittels: Concentra Guide
⑤ DOT Web site
⑥ NTIS Web site
⑦ Other_____

FMCSA References

⑧ FMCSA Web site
⑨ NRCME Web site
⑩ Federal Motor Carrier Safety regulations
⑪ Medical Report Form
⑫ Medical Advisory Criteria
⑬ Medical Conference Reports
⑭ Telephone support
⑮ Other _____

10. On average, how many physical examinations for CMV (DOT-FMCSA) drivers do you personally perform each month?

Write numbers over each blank space and fill in the corresponding bubble below.

— — — —

⓪⓪⓪⓪
①①①①
②②②②
③③③③
④④④④
⑤⑤⑤⑤
⑥⑥⑥⑥
⑦⑦⑦⑦
⑧⑧⑧⑧
⑨⑨⑨⑨

11. For how many years have you been performing physical examinations for CMV drivers?

Write numbers over each blank space and fill in the corresponding bubble below.

— —

⓪⓪
①①
②②
③③
④④
⑤⑤
⑥⑥
⑦⑦
⑧⑧
⑨⑨

12. Which of the following best describes the community in which you practice?

① Rural
② Suburban
③ Urban

13. In what zip code do you primarily practice?

Write zip code numbers over each blank space and fill in the corresponding bubble below.

— — — — —

⓪⓪⓪⓪⓪
①①①①①
②②②②②
③③③③③
④④④④④
⑤⑤⑤⑤⑤
⑥⑥⑥⑥⑥
⑦⑦⑦⑦⑦
⑧⑧⑧⑧⑧
⑨⑨⑨⑨⑨

14. How many people in each of the following groups do you know who also perform CMV physical examinations?

Write numbers over each blank space and fill in the corresponding bubble below.

APN	DC	DO	MD	PA
⓪⓪	⓪⓪	⓪⓪	⓪⓪	⓪⓪
①①	①①	①①	①①	①①
②②	②②	②②	②②	②②
③③	③③	③③	③③	③③
④④	④④	④④	④④	④④
⑤⑤	⑤⑤	⑤⑤	⑤⑤	⑤⑤
⑥⑥	⑥⑥	⑥⑥	⑥⑥	⑥⑥
⑦⑦	⑦⑦	⑦⑦	⑦⑦	⑦⑦
⑧⑧	⑧⑧	⑧⑧	⑧⑧	⑧⑧
⑨⑨	⑨⑨	⑨⑨	⑨⑨	⑨⑨

15. What was the year of your birth?

Write the last two digits of your birth year over each blank space and fill in the corresponding bubble below.

1 9 __ __

⓪⓪
①①
②②
③③
④④
⑤⑤
⑥⑥
⑦⑦
⑧⑧
⑨⑨

16. What is your gender?

① Female
② Male

17. With which of the following ethnic and racial groups do you most closely identify?

Select one or more

	Ethnic Groups	
Racial Groups	**Hispanic or Latino**	**Not Hispanic or Latino**
American Indian or Alaska Native	①	②
Asian	③	④
Black or African American	⑤	⑥
Native Hawaiian or Other Pacific Islander	⑦	⑧
White	⑨	⑩

Thank you for completing this survey.

Please return the survey in the postage-paid return envelope to:

ATTN: NRCME Role Delineation Study
Applied Measurement Professionals, Inc.
8310 Nieman Road
Lenexa, KS 66214

APPENDIX C

Opt-In Postcard, Survey Warning Postcard, and Follow-up Survey

OPT-IN POSTCARD

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

Subject: Volunteers Needed to Take FMCSA Medical Examiners Survey

The Federal Motor Carrier Safety Administration (FMCSA) will soon propose a National Registry of Certified Medical Examiners (NRCME) to improve highway safety by producing trained, certified FMCSA medical examiners who can effectively determine if a commercial motor vehicle (CMV) driver's health meets FMCSA standards.

As part of the development of the NRCME program, FMCSA is in the process of identifying 5,000 medical examiners (1,000 each from Advanced Practice Nurses, Doctors of Chiropractic, Doctors of Osteopathy, Medical Doctors, and Physician Assistants) who currently perform CMV driver physical examinations to complete a survey analyzing the role of the medical examiner.

If you perform CMV driver physical exams, please volunteer by September 15, 2006 to take the survey. The survey will be distributed by U.S. Mail after it has been approved by the Office of Management and Budget (OMB). Survey volunteers will be notified prior to its distribution.

For more information on the NRCME program, visit the NRCME Web site at http://www.nrcme.fmcsa.dot.gov.

Thank you for your help and commitment to improving highway safety. Please share this request with your colleagues who perform CMV driver physical examinations, so they can also volunteer for the NRCME survey.

Please help improve highway safety by volunteering to participate in the NRCME survey at:

http://www.nrcme.fmcsa.dot.gov/survey_request.aspx

The National Registry: ***A Roadmap to Improved Highway Safety***

You may also complete this form, detach, and return by mail or fax to (703) 575-8521.

Name:_____ Medical Profession: APN DC DO MD PA

Address:_____ City:_____ State:_____ Zip:_____

Telephone Number: (_____) _____ E-Mail: _____

I perform the DOT physical and volunteer for the NRCME survey: Yes No

Thank you for your contribution to this very important program.

SURVEY WARNING POSTCARD

National Registry of Certified Medical Examiners
Federal Motor Carrier Safety Administration

Dear Medical Examiner,

You have been selected from a group of your professional colleagues to receive the Federal Motor Carrier Safety Administration (FMCSA) Medical Examiner Role Delineation Study survey in just a few days. The survey will ask you about tasks you perform while examining drivers to determine whether they are physically qualified to operate interstate commercial motor vehicles. Your professional insight into this important survey is invaluable.

FMCSA will soon propose a National Registry of Certified Medical Examiners (NRCME) program. Survey results will be used to develop content for a new certification test and training curriculum for the NRCME program. More information about the program can be found at http://www.nrcme.fmcsa.dot.gov/.

Commercial motor vehicle drivers eventually will find medical examiners listed on the National Registry. Only medical examiners who have successfully completed training and certification will be listed. Don't miss this opportunity to provide input into certification program content.

National Registry of Certified Medical Examiners
Federal Motor Carrier Safety Administration

Dear Medical Examiner,

You should have recently received the Federal Motor Carrier Safety Administration (FMCSA) Medical Examiner Role Delineation Study survey. You were selected to represent your professional colleagues, so your professional insight is invaluable. The survey asks you about the tasks you perform while examining drivers to determine whether they are physically qualified to operate interstate commercial motor vehicles. If you did not receive a survey and you would like to complete one, please contact Michael Clark at 913-495-4466.

FMCSA will soon propose a National Registry of Certified Medical Examiners (NRCME) program. Survey results will be used to develop content for a certification test and training curriculum for the NRCME program. More information about the program can be found at http://www.nrcme.fmcsa.dot.gov/.

Commercial motor vehicle drivers eventually will find medical examiners listed on the National Registry. Only medical examiners who have successfully completed training and certification will be listed. Don't miss this opportunity to provide input into certification program content.

If you do not intend to respond to the survey, then please respond to the following questions. A postage-paid return envelope is enclosed for your use. These responses are requested so demographic characteristics of those who do not submit survey responses can be compared to characteristics of those who do.

Select only one response to each item unless otherwise directed.

1. Which of the following is your profession?

① Advanced Practice Nurse
② Doctor of Chiropractic
③ Doctor of Osteopathic Medicine
④ Medical Doctor
⑤ Physician Assistant
⑥ Other _____

2. For how many years have you been working in your current profession?

Write numbers over each blank space and fill in the corresponding bubble below.

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

3. Which of the following best describes your primary job function?

① Administration
② Clinical
③ Consultant
④ Education
⑤ Research
⑥ Other _____

4. In what type of healthcare environment do you work?

① Academic
② Group practice
③ Hospital
④ Industry / on-site
⑤ Military
⑥ Multi-specialty
⑦ Solo practice
⑧ Urgent care
⑨ Other _____

5. Is occupational health your primary work responsibility?

① No
② Yes

6. Have you had training in occupational health?

① No
② Yes

7. Have you attended a training course for CMV driver physical examinations?

① No (Skip to question 9)
② Yes

8. If yes, did you take your course from any of the following organizations? (select all that apply)

① American Academy of Physician Assistants National Conference
② American College of Occupational and Environmental Medicine
③ Concentra
④ Intermountain Heath Care
⑤ National University of Health Sciences
⑥ Other _____

9. To what materials do you typically refer when performing a physical exam for CMV drivers? (select all that apply)

General References

① Consensus reports from specialty organizations
② Federal Register notices
③ Hartenbaum: The DOT Medical Exam
④ Wittels: Concentra Guide
⑤ DOT Web site
⑥ NTIS Web site
⑦ Other_____

FMCSA References

⑧ FMCSA Web site
⑨ NRCME Web site
⑩ Federal Motor Carrier Safety regulations
⑪ Medical Report Form
⑫ Medical Advisory Criteria
⑬ Medical Conference Reports
⑭ Telephone support
⑮ Other _____

10. On average, how many physical examinations for CMV (DOT-FMCSA) drivers do **you personally** perform each **month**?

Write numbers over each blank space and fill in the corresponding bubble below.

⓪	⓪	⓪	⓪
①	①	①	①
②	②	②	②
③	③	③	③
④	④	④	④
⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨

11. For how many years have you been performing physical examinations for CMV drivers?

Write numbers over each blank space and fill in the corresponding bubble below.

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧

12. Which of the following best describes the community in which you practice?

① Rural
② Suburban
③ Urban

13. In what zip code do you primarily practice?

Write zip code numbers over each blank space and fill in the corresponding bubble below.

⓪	⓪	⓪	⓪	⓪
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

15. What was the year of your birth?

Write the last two digits of your birth year over each blank space and fill in the corresponding bubble below.

1 9 ___ ___

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

14. How many people in each of the following groups do you know who also perform CMV physical examinations?

Write numbers over each blank space and fill in the corresponding bubble below.

APN

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

DC

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧

DO

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

MD

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

PA

⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

16. What is your gender?

① Female
② Male

17. With which of the following ethnic and racial groups do you most closely identify?

Select one or more

Racial Groups	**Ethnic Groups**	
	Hispanic or Latino	**Not Hispanic or Latino**
American Indian or Alaska Native	①	②
Asian	③	④
Black or African American	⑤	⑥
Native Hawaiian or Other Pacific Islander	⑦	⑧
White	⑨	⑩

Thank you for responding to these questions.
Please return the document in the postage-paid return envelope to:

ATTN: NRCME Role Delineation Study
Applied Measurement Professionals, Inc.
8310 Nieman Road
Lenexa, KS 66214

APPENDIX D

Background Information Frequency Tables for the Full Survey Sample

Table 1
Q1: Which of the following is your profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	APN	444	19.3	19.7	19.7
	DC	339	14.8	15.0	34.7
	DO	185	8.1	8.2	42.9
	MD	587	25.6	26.0	68.9
	PA	693	30.2	30.7	99.6
	Other	7	.3	.3	99.9
	Multiple Responses	2	.1	.1	100.0
	Total	2257	98.3	100.0	
Missing	System	40	1.7		
Total		2297	100.0		

Table 2
Q2: For how many years have you been working in your current profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	1.0	1.1	1.1
	2	65	2.8	2.9	4.0
	3	56	2.4	2.5	6.5
	4	62	2.7	2.8	9.2
	5	64	2.8	2.9	12.1
	6	91	4.0	4.1	16.2
	7	87	3.8	3.9	20.0
	8	87	3.8	3.9	23.9
	9	63	2.7	2.8	26.7
	10	140	6.1	6.3	33.0
	11	74	3.2	3.3	36.3
	12	84	3.7	3.8	40.0
	13	55	2.4	2.5	42.5
	14	49	2.1	2.2	44.7
	15	75	3.3	3.3	48.0
	16	66	2.9	2.9	51.0
	17	52	2.3	2.3	53.3
	18	56	2.4	2.5	55.8
	19	27	1.2	1.2	57.0
	20	110	4.8	4.9	61.9
	21	51	2.2	2.3	64.2
	22	53	2.3	2.4	66.6
	23	62	2.7	2.8	69.3

		Frequency	Percent	Valid Percent	Cumulative Percent
	24	48	2.1	2.1	71.5
	25	110	4.8	4.9	76.4
	26	59	2.6	2.6	79.0
	27	58	2.5	2.6	81.6
	28	55	2.4	2.5	84.1
	29	43	1.9	1.9	86.0
	30	91	4.0	4.1	90.0
	31	38	1.7	1.7	91.7
	32	39	1.7	1.7	93.5
	33	30	1.3	1.3	94.8
	34	15	.7	.7	95.5
	35	28	1.2	1.3	96.7
	36	10	.4	.4	97.2
	37	9	.4	.4	97.6
	38	8	.3	.4	97.9
	39	4	.2	.2	98.1
	40	13	.6	.6	98.7
	41	3	.1	.1	98.8
	42	5	.2	.2	99.1
	43	3	.1	.1	99.2
	44	3	.1	.1	99.3
	45	5	.2	.2	99.6
	46	4	.2	.2	99.7
	47	1	.0	.0	99.8
	48	1	.0	.0	99.8
	49	1	.0	.0	99.9
	50	1	.0	.0	99.9
	52	2	.1	.1	100.0
	Total	2240	97.5	100.0	
Missing	System	57	2.5		
Total		2297	100.0		

Table 3

Descriptive Statistics for Q2: For how many years have you been working in your current profession?

N	Valid	2240
	Missing	57
Mean		17.31
Median		16.00
Std. Deviation		10.11
Minimum		1
Maximum		52

Table 4

Q3: Which of the following best describes your primary job function?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administration	37	1.6	1.6	1.6
	Clinical	2151	93.6	95.3	97.0
	Consultant	21	.9	.9	97.9
	Education	20	.9	.9	98.8
	Research	2	.1	.1	98.9
	Other	19	.8	.8	99.7
	Multiple Responses	6	.3	.3	100.0
	Total	2256	98.2	100.0	
Missing	System	41	1.8		
Total		2297	100.0		

Table 5
Q4: In what type of healthcare environment do you work?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Academic	29	1.3	1.3	1.3
	Group practice	758	33.0	33.9	35.2
	Hospital	207	9.0	9.3	44.4
	Industry/on-site	134	5.8	6.0	50.4
	Military	10	.4	.4	50.9
	Multi-specialty	107	4.7	4.8	55.7
	Solo practice	502	21.9	22.4	78.1
	Urgent care	182	7.9	8.1	86.2
	Other	252	11.0	11.3	97.5
	Multiple Responses	56	2.4	2.5	100.0
	Total	2237	97.4	100.0	
Missing	System	60	2.6		
Total		2297	100.0		

Table 6
Q5: Is occupational health your primary work responsibility?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1123	48.9	49.9	49.9
	Yes	1127	49.1	50.1	100.0
	Total	2250	98.0	100.0	
Missing	System	47	2.0		
Total		2297	100.0		

Table 7
Q6: Have you had training in occupational health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	745	32.4	33.2	33.2
	Yes	1495	65.1	66.7	100.0
	Multiple Responses	1	.0	.0	100.0
	Total	2241	97.6	100.0	
Missing	System	56	2.4		
Total		2297	100.0		

Table 8

Q7: Have you attended a training course for CMV driver physical examinations?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1615	70.3	72.3	72.3
	Yes	619	26.9	27.7	100.0
	Total	2234	97.3	100.0	
Missing	System	63	2.7		
Total		2297	100.0		

Table 9

Q8: If yes, did you take your course from any of the following organizations?

	N	Percent of Cases
American Academy of Physician Assistants National Conference	64	10.4%
American College of Occupational and Environmental Medicine	342	55.5%
Concentra	112	18.2%
Intermountain Health Care	4	.6%
National University of Health Sciences	25	4.1%
Other	121	19.6%
Total	668	*

**Note.* Because participants were allowed to choose more than one answer, responses will not sum to 100%.

Table 10

Q9: To what materials do you typically refer when performing a physical exam for CMV drivers?

	N	Percent of Cases
Consensus reports from specialty organizations	560	25.4%
Federal Register notices	650	29.5%
Hartenbaum: The DOT Medical Exam	1359	61.6%
Wittels: Concentra Guide	166	7.5%
DOT web site	1261	57.2%
NTIS web site	166	7.5%
Other (general)	215	9.8%
FMCSA web site	917	41.6%
NRCME web site	268	12.2%
Federal Motor Carrier safety regulations	1265	57.4%
Medical report form	660	29.9%
Medical advisory criteria	508	23.0%
Medical conference reports	371	16.8%
Telephone support	318	14.4%
Other (FMCSA)	54	2.4%
Total	8738	*

**Note.* Because participants were allowed to choose more than one answer, responses will not sum to 100%.

Table 11

Q10: On average, how many physical examinations for CMV drivers do you personally perform each month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	72	3.1	3.2	3.2
	1	156	6.8	7.0	10.2
	2	156	6.8	7.0	17.2
	3	77	3.4	3.5	20.7
	4	51	2.2	2.3	22.9
	5	153	6.7	6.9	29.8
	6	33	1.4	1.5	31.3
	7	11	.5	.5	31.8
	8	45	2.0	2.0	33.8
	9	5	.2	.2	34.0
	10	202	8.8	9.1	43.1
	12	32	1.4	1.4	44.5
	13	3	.1	.1	44.6
	14	3	.1	.1	44.8
	15	75	3.3	3.4	48.1
	16	7	.3	.3	48.5
	17	1	.0	.0	48.5
	18	1	.0	.0	48.5
	19	1	.0	.0	48.6
	20	149	6.5	6.7	55.3
	21	1	.0	.0	55.3
	22	2	.1	.1	55.4
	23	2	.1	.1	55.5
	24	3	.1	.1	55.6
	25	82	3.6	3.7	59.3
	26	1	.0	.0	59.3
	27	1	.0	.0	59.4
	28	3	.1	.1	59.5
	29	1	.0	.0	59.6
	30	106	4.6	4.8	64.3
	32	1	.0	.0	64.4
	33	1	.0	.0	64.4
	35	20	.9	.9	65.3
	36	2	.1	.1	65.4
	37	1	.0	.0	65.4
	40	92	4.0	4.1	69.6

	Frequency	Percent	Valid Percent	Cumulative Percent
41	1	.0	.0	69.6
42	1	.0	.0	69.7
45	13	.6	.6	70.2
46	2	.1	.1	70.3
48	2	.1	.1	70.4
50	110	4.8	4.9	75.3
55	5	.2	.2	75.6
56	1	.0	.0	75.6
58	2	.1	.1	75.7
60	81	3.5	3.6	79.3
62	1	.0	.0	79.4
63	1	.0	.0	79.4
64	1	.0	.0	79.5
65	11	.5	.5	80.0
69	1	.0	.0	80.0
70	12	.5	.5	80.5
75	34	1.5	1.5	82.1
80	55	2.4	2.5	84.5
85	4	.2	.2	84.7
89	2	.1	.1	84.8
90	8	.3	.4	85.2
95	1	.0	.0	85.2
96	1	.0	.0	85.3
100	147	6.4	6.6	91.8
110	5	.2	.2	92.1
111	1	.0	.0	92.1
120	19	.8	.9	93.0
125	12	.5	.5	93.5
130	2	.1	.1	93.6
132	1	.0	.0	93.6
138	1	.0	.0	93.7
140	7	.3	.3	94.0
143	1	.0	.0	94.0
145	1	.0	.0	94.1
150	22	1.0	1.0	95.1
160	4	.2	.2	95.2
175	7	.3	.3	95.6
190	1	.0	.0	95.6
199	1	.0	.0	95.7

		Frequency	Percent	Valid Percent	Cumulative Percent
	200	38	1.7	1.7	97.4
	205	1	.0	.0	97.4
	210	1	.0	.0	97.4
	220	2	.1	.1	97.5
	240	2	.1	.1	97.6
	250	14	.6	.6	98.3
	260	2	.1	.1	98.3
	264	1	.0	.0	98.4
	280	2	.1	.1	98.5
	300	13	.6	.6	99.1
	320	1	.0	.0	99.1
	325	1	.0	.0	99.1
	334	1	.0	.0	99.2
	350	2	.1	.1	99.3
	380	1	.0	.0	99.3
	400	4	.2	.2	99.5
	500	5	.2	.2	99.7
	600	1	.0	.0	99.8
	900	1	.0	.0	99.8
	1000	3	.1	.1	100.0
	1125	1	.0	.0	100.0
	Total	2231	97.1	100.0	
Missing	System	66	2.9		
Total		2297	100.0		

Table 12

Descriptive Statistics for Q10: On average, how many physical examinations for CMV drivers do you personally perform each month?

N	Valid	2231
	Missing	66
Mean		43.50
Median		20.00
Std. Deviation		76.50
Minimum		0
Maximum		1125

Table 13

Q11: For how many years have you been performing physical examinations for CMV drivers?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	84	3.7	3.8	3.8
	2	124	5.4	5.6	9.4
	3	128	5.6	5.8	15.2
	4	98	4.3	4.4	19.7
	5	113	4.9	5.1	24.8
	6	124	5.4	5.6	30.4
	7	121	5.3	5.5	35.9
	8	111	4.8	5.0	40.9
	9	61	2.7	2.8	43.7
	10	213	9.3	9.6	53.3
	11	64	2.8	2.9	56.2
	12	102	4.4	4.6	60.8
	13	42	1.8	1.9	62.7
	14	39	1.7	1.8	64.5
	15	146	6.4	6.6	71.1
	16	46	2.0	2.1	73.2
	17	40	1.7	1.8	75.0
	18	55	2.4	2.5	77.5
	19	31	1.3	1.4	78.9
	20	122	5.3	5.5	84.4
	21	23	1.0	1.0	85.5
	22	40	1.7	1.8	87.3
	23	21	.9	1.0	88.2
	24	13	.6	.6	88.8
	25	82	3.6	3.7	92.5
	26	14	.6	.6	93.2
	27	17	.7	.8	93.9
	28	21	.9	1.0	94.9
	29	19	.8	.9	95.7
	30	31	1.3	1.4	97.1
	31	8	.3	.4	97.5
	32	12	.5	.5	98.1
	33	8	.3	.4	98.4
	34	6	.3	.3	98.7
	35	9	.4	.4	99.1
	36	8	.3	.4	99.5
	38	2	.1	.1	99.5

		Frequency	Percent	Valid Percent	Cumulative Percent
	40	2	.1	.1	99.6
	41	1	.0	.0	99.7
	43	1	.0	.0	99.7
	44	2	.1	.1	99.8
	45	3	.1	.1	100.0
	55	1	.0	.0	100.0
	Total	2208	96.1	100.0	
Missing	System	89	3.9		
Total		2297	100.0		

Table 14

Descriptive Statistics for Q11: For how many years have you been performing physical examinations for CMV drivers?

N	Valid	2208
	Missing	89
Mean		12.14
Median		10.00
Std. Deviation		8.43
Minimum		1
Maximum		55

Table 15

Q12: Which of the following best describes the community in which you practice?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	773	33.7	34.6	34.6
	Suburban	805	35.0	36.0	70.6
	Urban	654	28.5	29.3	99.9
	Multiple Responses	3	.1	.1	100.0
	Total	2235	97.3	100.0	
Missing	System	62	2.7		
Total		2297	100.0		

Table 16

Q13: In what ZIP code do you primarily practice?

Responses were recoded to identify states.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CA	137	6.0	6.2	6.2
	PA	117	5.1	5.3	11.4
	FL	117	5.1	5.3	16.7
	NY	101	4.4	4.5	21.2
	OH	98	4.3	4.4	25.7
	TX	98	4.3	4.4	30.1
	WI	95	4.1	4.3	34.3
	IL	88	3.8	4.0	38.3
	MI	82	3.6	3.7	42.0
	IN	76	3.3	3.4	45.4
	NC	75	3.3	3.4	48.8
	MN	74	3.2	3.3	52.1
	TN	69	3.0	3.1	55.2
	KY	67	2.9	3.0	58.2
	IA	60	2.6	2.7	60.9
	CO	49	2.1	2.2	63.1
	AZ	48	2.1	2.2	65.3
	OR	46	2.0	2.1	67.4
	WA	44	1.9	2.0	69.4
	VA	42	1.8	1.9	71.2
	GA	42	1.8	1.9	73.1
	NJ	41	1.8	1.8	75.0
	MO	38	1.7	1.7	76.7
	LA	35	1.5	1.6	78.3
	MA	32	1.4	1.4	79.7
	SD	32	1.4	1.4	81.1
	CT	31	1.3	1.4	82.5
	KS	29	1.3	1.3	83.8
	AL	27	1.2	1.2	85.1
	MT	27	1.2	1.2	86.3
	OK	27	1.2	1.2	87.5
	MD	26	1.1	1.2	88.7
	SC	24	1.0	1.1	89.7
	NV	22	1.0	1.0	90.7
	NE	21	.9	.9	91.7
	NM	21	.9	.9	92.6

		Frequency	Percent	Valid Percent	Cumulative Percent
	NH	20	.9	.9	93.5
	AR	16	.7	.7	94.2
	UT	16	.7	.7	95.0
	ME	13	.6	.6	95.5
	ID	13	.6	.6	96.1
	MS	12	.5	.5	96.7
	AK	12	.5	.5	97.2
	WV	11	.5	.5	97.7
	DE	10	.4	.5	98.2
	DC	10	.4	.5	98.6
	ND	10	.4	.5	99.1
	RI	7	.3	.3	99.4
	VT	5	.2	.2	99.6
	WY	5	.2	.2	99.8
	HI	4	.2	.2	100.0
	Total	2222	96.7	100.0	
Missing	System	75	3.3		
Total		2297	100.0		

**Note.* All 50 states and the District of Columbia are represented.

Table 17

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – APN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1083	47.1	52.9	52.9
	1	330	14.4	16.1	69.0
	2	210	9.1	10.2	79.2
	3	118	5.1	5.8	85.0
	4	59	2.6	2.9	87.8
	5	86	3.7	4.2	92.0
	6	22	1.0	1.1	93.1
	7	7	.3	.3	93.5
	8	14	.6	.7	94.1
	9	5	.2	.2	94.4
	10	51	2.2	2.5	96.9
	11	1	.0	.0	96.9
	12	5	.2	.2	97.2
	13	1	.0	.0	97.2
	15	9	.4	.4	97.7
	16	1	.0	.0	97.7
	20	16	.7	.8	98.5
	21	1	.0	.0	98.5
	25	7	.3	.3	98.9
	26	1	.0	.0	98.9
	29	1	.0	.0	99.0
	30	6	.3	.3	99.3
	40	1	.0	.0	99.3
	50	5	.2	.2	99.6
	52	1	.0	.0	99.6
	75	1	.0	.0	99.7
	90	1	.0	.0	99.7
	99	6	.3	.3	100.0
	Total	2049	89.2	100.0	
Missing	System	248	10.8		
Total		2297	100.0		

Table 18

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – DC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1682	73.2	82.5	82.5
	1	104	4.5	5.1	87.6
	2	56	2.4	2.7	90.3
	3	31	1.3	1.5	91.9
	4	21	.9	1.0	92.9
	5	33	1.4	1.6	94.5
	6	14	.6	.7	95.2
	7	6	.3	.3	95.5
	8	8	.3	.4	95.9
	9	2	.1	.1	96.0
	10	29	1.3	1.4	97.4
	11	4	.2	.2	97.6
	12	4	.2	.2	97.8
	15	1	.0	.0	97.8
	18	1	.0	.0	97.9
	20	14	.6	.7	98.6
	22	2	.1	.1	98.7
	23	1	.0	.0	98.7
	25	5	.2	.2	99.0
	26	1	.0	.0	99.0
	30	7	.3	.3	99.4
	32	1	.0	.0	99.4
	35	2	.1	.1	99.5
	40	3	.1	.1	99.7
	50	2	.1	.1	99.8
	60	2	.1	.1	99.9
	99	3	.1	.1	100.0
	Total	2039	88.8	100.0	
Missing	System	258	11.2		
Total		2297	100.0		

Table 19

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – DO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1031	44.9	50.4	50.4
	1	351	15.3	17.1	67.5
	2	244	10.6	11.9	79.4
	3	122	5.3	6.0	85.4
	4	55	2.4	2.7	88.1
	5	81	3.5	4.0	92.0
	6	17	.7	.8	92.9
	7	4	.2	.2	93.1
	8	10	.4	.5	93.6
	9	1	.0	.0	93.6
	10	74	3.2	3.6	97.2
	11	2	.1	.1	97.3
	12	8	.3	.4	97.7
	13	1	.0	.0	97.8
	14	2	.1	.1	97.9
	15	5	.2	.2	98.1
	20	15	.7	.7	98.8
	21	1	.0	.0	98.9
	24	1	.0	.0	98.9
	25	6	.3	.3	99.2
	30	5	.2	.2	99.5
	34	1	.0	.0	99.5
	50	5	.2	.2	99.8
	66	1	.0	.0	99.8
	99	4	.2	.2	100.0
	Total	2047	89.1	100.0	
Missing	System	250	10.9		
Total		2297	100.0		

Table 20

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – MD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	243	10.6	11.8	11.8
	1	212	9.2	10.3	22.0
	2	238	10.4	11.5	33.5
	3	186	8.1	9.0	42.5
	4	142	6.2	6.9	49.4
	5	214	9.3	10.4	59.7
	6	103	4.5	5.0	64.7
	7	45	2.0	2.2	66.9
	8	58	2.5	2.8	69.7
	9	20	.9	1.0	70.7
	10	220	9.6	10.6	81.3
	11	7	.3	.3	81.7
	12	34	1.5	1.6	83.3
	13	6	.3	.3	83.6
	14	9	.4	.4	84.0
	15	64	2.8	3.1	87.1
	16	3	.1	.1	87.3
	17	2	.1	.1	87.4
	18	3	.1	.1	87.5
	19	3	.1	.1	87.7
	20	86	3.7	4.2	91.8
	21	4	.2	.2	92.0
	22	6	.3	.3	92.3
	24	2	.1	.1	92.4
	25	29	1.3	1.4	93.8
	29	1	.0	.0	93.9
	30	39	1.7	1.9	95.7
	33	1	.0	.0	95.8
	35	4	.2	.2	96.0
	36	1	.0	.0	96.0
	39	1	.0	.0	96.1
	40	11	.5	.5	96.6
	45	3	.1	.1	96.8
	46	1	.0	.0	96.8
	50	29	1.3	1.4	98.2
	55	2	.1	.1	98.3

		Frequency	Percent	Valid Percent	Cumulative Percent
	60	2	.1	.1	98.4
	68	1	.0	.0	98.5
	85	1	.0	.0	98.5
	87	1	.0	.0	98.5
	90	1	.0	.0	98.6
	99	29	1.3	1.4	100.0
	Total	2067	90.0	100.0	
Missing	System	230	10.0		
Total		2297	100.0		

Table 21

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – PA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	745	32.4	36.3	36.3
	1	335	14.6	16.3	52.6
	2	272	11.8	13.2	65.9
	3	173	7.5	8.4	74.3
	4	104	4.5	5.1	79.3
	5	126	5.5	6.1	85.5
	6	58	2.5	2.8	88.3
	7	15	.7	.7	89.0
	8	24	1.0	1.2	90.2
	9	7	.3	.3	90.6
	10	89	3.9	4.3	94.9
	12	12	.5	.6	95.5
	13	2	.1	.1	95.6
	14	1	.0	.0	95.6
	15	27	1.2	1.3	96.9
	16	2	.1	.1	97.0
	18	1	.0	.0	97.1
	19	1	.0	.0	97.1
	20	24	1.0	1.2	98.3
	22	2	.1	.1	98.4
	25	6	.3	.3	98.7
	28	1	.0	.0	98.7
	30	10	.4	.5	99.2
	31	1	.0	.0	99.3
	35	1	.0	.0	99.3
	40	3	.1	.1	99.5
	50	3	.1	.1	99.6
	55	1	.0	.0	99.7
	56	1	.0	.0	99.7
	80	1	.0	.0	99.8
	99	5	.2	.2	100.0
	Total	2053	89.4	100.0	
Missing	System	244	10.6		
Total		2297	100.0		

Table 22

Descriptive Statistics for Q14: How many people in each of the following groups do you know who also perform CMV physical examinations?

		APN	DC	DO	MD	PA
N	Valid	2049	2039	2047	2067	2053
	Missing	248	258	250	230	244
Mean		2.30	1.29	2.16	8.79	3.28
Median		.00	.00	.00	5.00	1.00
Std. Deviation		7.422	5.921	6.265	14.541	7.298
Minimum		0	0	0	0	0
Maximum		99	99	99	99	99

Table 23

Q15: What was the year of your birth?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1927	2	.1	.1	.1
	1928	1	.0	.0	.1
	1929	3	.1	.1	.3
	1930	2	.1	.1	.4
	1931	3	.1	.1	.5
	1932	4	.2	.2	.7
	1933	3	.1	.1	.8
	1934	4	.2	.2	1.0
	1935	7	.3	.3	1.3
	1936	8	.3	.4	1.7
	1937	7	.3	.3	2.0
	1938	9	.4	.4	2.4
	1939	7	.3	.3	2.7
	1940	7	.3	.3	3.1
	1941	12	.5	.5	3.6
	1942	25	1.1	1.1	4.8
	1943	37	1.6	1.7	6.5
	1944	29	1.3	1.3	7.8
	1945	25	1.1	1.1	8.9
	1946	60	2.6	2.7	11.7
	1947	71	3.1	3.2	14.9
	1948	77	3.4	3.5	18.4
	1949	71	3.1	3.2	21.7
	1950	79	3.4	3.6	25.3
	1951	98	4.3	4.5	29.8
	1952	97	4.2	4.4	34.2

		Frequency	Percent	Valid Percent	Cumulative Percent
	1953	123	5.4	5.6	39.8
	1954	109	4.7	5.0	44.8
	1955	106	4.6	4.8	49.7
	1956	108	4.7	4.9	54.6
	1957	86	3.7	3.9	58.6
	1958	98	4.3	4.5	63.0
	1959	61	2.7	2.8	65.8
	1960	72	3.1	3.3	69.1
	1961	51	2.2	2.3	71.5
	1962	54	2.4	2.5	73.9
	1963	55	2.4	2.5	76.4
	1964	41	1.8	1.9	78.3
	1965	54	2.4	2.5	80.8
	1966	45	2.0	2.1	82.8
	1967	36	1.6	1.6	84.5
	1968	33	1.4	1.5	86.0
	1969	42	1.8	1.9	87.9
	1970	46	2.0	2.1	90.0
	1971	45	2.0	2.1	92.1
	1972	32	1.4	1.5	93.5
	1973	30	1.3	1.4	94.9
	1974	24	1.0	1.1	96.0
	1975	19	.8	.9	96.9
	1976	16	.7	.7	97.6
	1977	19	.8	.9	98.5
	1978	12	.5	.5	99.0
	1979	6	.3	.3	99.3
	1980	6	.3	.3	99.6
	1981	8	.3	.4	100.0
	1983	1	.0	.0	100.0
	Total	2186	95.2	100.0	
Missing	System	111	4.8		
Total		2297	100.0		

Table 24

Q16: What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	771	33.6	36.3	36.3
	Male	1353	58.9	63.7	100.0
	Total	2124	92.5	100.0	
Missing	System	173	7.5		
Total		2297	100.0		

Table 25

Q17: With which of the following ethnic and racial groups do you most closely identify?

			Ethnicity		
			Hispanic	Non-Hispanic	Total
Race	American Indian or Alaska Native	Count	13	31	44
		% of Cases	.6%	1.4%	2.0%
	Asian	Count	15	58	73
		% of Cases	.7%	2.7%	3.4%
	Black or African American	Count	31	58	89
		% of Cases	1.4%	2.7%	4.1%
	Native Hawaiian or Pacific Islander	Count	3	16	19
		% of Cases	.1%	.7%	.8%
	White	Count	148	1913	2061
		% of Cases	6.9%	88.7%	95.6%
Total		Count	210	2076	2286
		% of Cases	9.7%	96.2%	*

**Note.* Because participants were allowed to choose more than one answer, responses will not sum to 100%.

APPENDIX E

Background Information Frequency Tables for the Follow-Up Survey Sample

Table 1

Q1: Which of the following is your profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	APN	181	20.3	20.4	20.4
	DC	160	18.0	18.0	38.4
	DO	98	11.0	11.0	49.4
	MD	190	21.3	21.4	70.8
	PA	256	28.7	28.8	99.6
	Other	4	.4	.4	100.0
	Total	889	99.8	100.0	
Missing	System	2	.2		
Total		891	100.0		

Table 2

Q2: For how many years have you been working in your current profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	1.3	1.4	1.4
	2	1	.1	.1	1.5
	2	17	1.9	1.9	3.4
	3	24	2.7	2.7	6.1
	4	23	2.6	2.6	8.7
	5	29	3.3	3.3	12.0
	6	35	3.9	4.0	15.9
	7	40	4.5	4.5	20.5
	8	35	3.9	4.0	24.4
	9	25	2.8	2.8	27.2
	10	62	7.0	7.0	34.2
	11	20	2.2	2.3	36.5
	12	38	4.3	4.3	40.8
	13	23	2.6	2.6	43.4
	14	20	2.2	2.3	45.6
	15	29	3.3	3.3	48.9
	16	19	2.1	2.1	51.1
	17	18	2.0	2.0	53.1
	18	22	2.5	2.5	55.6
	19	17	1.9	1.9	57.5
	20	38	4.3	4.3	61.8
	21	17	1.9	1.9	63.7
	22	27	3.0	3.1	66.8
	23	22	2.5	2.5	69.3

		Frequency	Percent	Valid Percent	Cumulative Percent
	24	20	2.2	2.3	71.5
	25	49	5.5	5.5	77.1
	26	17	1.9	1.9	79.0
	27	21	2.4	2.4	81.4
	28	28	3.1	3.2	84.5
	29	13	1.5	1.5	86.0
	30	42	4.7	4.7	90.7
	31	14	1.6	1.6	92.3
	32	13	1.5	1.5	93.8
	33	7	.8	.8	94.6
	34	6	.7	.7	95.3
	35	12	1.3	1.4	96.6
	36	1	.1	.1	96.7
	37	4	.4	.5	97.2
	38	2	.2	.2	97.4
	40	5	.6	.6	98.0
	41	2	.2	.2	98.2
	42	3	.3	.3	98.5
	43	1	.1	.1	98.6
	44	3	.3	.3	99.0
	45	1	.1	.1	99.1
	46	2	.2	.2	99.3
	47	1	.1	.1	99.4
	48	1	.1	.1	99.5
	49	1	.1	.1	99.7
	50	2	.2	.2	99.9
	57	1	.1	.1	100.0
	Total	885	99.3	100.0	
Missing	System	6	.7		
Total		891	100.0		

Table 3

Descriptive Statistics for Q2: For how many years have you been working in your current profession?

N	Valid	885
	Missing	6
Mean		17.32
Median		16.00
Std. Deviation		10.29
Minimum		1
Maximum		57

Table 4

Q3: Which of the following best describes your primary job function?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administration	16	1.8	1.8	1.8
	Clinical	840	94.3	94.4	96.2
	Consultant	14	1.6	1.6	97.8
	Education	5	.6	.6	98.3
	Other	13	1.5	1.5	99.8
	Multiple Responses	2	.2	.2	100.0
	Total	890	99.9	100.0	
Missing	System	1	.1		
Total		891	100.0		

Table 5

Q4: In what type of healthcare environment do you work?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Academic	11	1.2	1.2	1.2
	Group practice	304	34.1	34.2	35.4
	Hospital	69	7.7	7.8	43.1
	Industry / on-site	42	4.7	4.7	47.9
	Military	8	.9	.9	48.8
	Multi-specialty	40	4.5	4.5	53.3
	Solo practice	249	27.9	28.0	81.2
	Urgent care	64	7.2	7.2	88.4
	Other	101	11.3	11.3	99.8
	Multiple Responses	2	.2	.2	100.0
	Total	890	99.9	100.0	
Missing	System	1	.1		
Total		891	100.0		

Table 6

Q5: Is occupational health your primary work responsibility?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	528	59.3	59.7	59.7
	Yes	357	40.1	40.3	100.0
	Total	885	99.3	100.0	
Missing	System	6	.7		
Total		891	100.0		

Table 7

Q6: Have you had training in occupational health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	331	37.1	37.4	37.4
	Yes	555	62.3	62.6	100.0
	Total	886	99.4	100.0	
Missing	System	5	.6		
Total		891	100.0		

Table 8

Q7: Have you attended a training course for CMV driver physical examinations?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	654	73.4	74.0	74.0
	Yes	230	25.8	26.0	100.0
	Total	884	99.2	100.0	
Missing	System	7	.8		
Total		891	100.0		

Table 9

Q8: If yes, did you take your course from any of the following organizations?

	N	Percent of Cases
American Academy of Physician Assistants National Conference	23	10.1%
American College of Occupational and Environmental Medicine	113	49.6%
Concentra	41	18.0%
Intermountain Health Care	3	1.3%
National University of Health Sciences	10	4.4%
Other	59	25.9%
Total	249	*

**Note.* Because participants were allowed to choose more than one answer, responses will not sum to 100.

Table 10

Q9: To what materials do you typically refer when performing a physical exam for CMV drivers?

	N	Percent of Cases
Consensus reports from specialty organizations	193	22.7%
Federal Register notices	254	29.9%
Hartenbaum: The DOT Medical Exam	478	56.3%
Wittels: Concentra Guide	57	6.7%
DOT web site	470	55.4%
NTIS web site	54	6.4%
Other (general)	101	11.9%
FMCSA web site	275	32.4%
NRCME web site	118	13.9%
Federal Motor Carrier safety regulations	417	49.1%
Medical report form	239	28.2%
Medical advisory criteria	141	16.6%
Medical conference reports	125	14.7%
Telephone support	124	14.6%
Other (FMCSA)	29	3.4%
Total	3075	*

**Note.* Because participants were allowed to choose more than one answer, responses will not sum to 100.

Table 11

Q10: On average, how many physical examinations for CMV drivers do you personally perform each month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	56	6.3	6.4	6.4
	1	95	10.7	10.8	17.2
	2	69	7.7	7.9	25.1
	3	38	4.3	4.3	29.4
	4	29	3.3	3.3	32.7
	5	51	5.7	5.8	38.5
	6	11	1.2	1.3	39.7
	7	5	.6	.6	40.3
	8	12	1.3	1.4	41.7
	9	3	.3	.3	42.0
	10	92	10.3	10.5	52.5
	12	15	1.7	1.7	54.2
	14	1	.1	.1	54.3
	15	32	3.6	3.6	58.0
	16	2	.2	.2	58.2
	18	1	.1	.1	58.3
	19	1	.1	.1	58.4
	20	61	6.8	6.9	65.4
	22	1	.1	.1	65.5
	23	1	.1	.1	65.6
	24	2	.2	.2	65.8
	25	24	2.7	2.7	68.6
	30	39	4.4	4.4	73.0
	32	2	.2	.2	73.2
	34	1	.1	.1	73.3
	35	1	.1	.1	73.5
	36	1	.1	.1	73.6
	40	27	3.0	3.1	76.7
	45	6	.7	.7	77.3
	48	1	.1	.1	77.4
	50	35	3.9	4.0	81.4
	55	3	.3	.3	81.8
	60	16	1.8	1.8	83.6
	64	1	.1	.1	83.7
	65	1	.1	.1	83.8
	69	1	.1	.1	83.9

		Frequency	Percent	Valid Percent	Cumulative Percent
	70	4	.4	.5	84.4
	75	11	1.2	1.3	85.6
	80	10	1.1	1.1	86.8
	85	1	.1	.1	86.9
	88	1	.1	.1	87.0
	90	3	.3	.3	87.4
	100	43	4.8	4.9	92.3
	110	1	.1	.1	92.4
	120	10	1.1	1.1	93.5
	122	1	.1	.1	93.6
	125	4	.4	.5	94.1
	140	4	.4	.5	94.5
	150	10	1.1	1.1	95.7
	175	2	.2	.2	95.9
	200	16	1.8	1.8	97.7
	220	1	.1	.1	97.8
	250	3	.3	.3	98.2
	260	1	.1	.1	98.3
	275	1	.1	.1	98.4
	285	1	.1	.1	98.5
	300	5	.6	.6	99.1
	331	1	.1	.1	99.2
	350	2	.2	.2	99.4
	355	1	.1	.1	99.5
	400	1	.1	.1	99.7
	500	1	.1	.1	99.8
	600	1	.1	.1	99.9
	1000	1	.1	.1	100.0
	Total	878	98.5	100.0	
Missing	System	13	1.5		
Total		891	100.0		

Table 12

Descriptive Statistics for Q10: On average, how many physical examinations for CMV drivers do you personally perform each month?

N	Valid	878
	Missing	13
Mean		36.10
Median		10.00
Std. Deviation		69.21
Minimum		0
Maximum		1000

Table 13

Q11: For how many years have you been performing physical examinations for CMV drivers?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	31	3.5	3.5	3.5
	1	33	3.7	3.7	7.2
	2	41	4.6	4.6	11.8
	3	1	.1	.1	12.0
	3	38	4.3	4.3	16.2
	4	32	3.6	3.6	19.8
	5	59	6.6	6.7	26.5
	6	44	4.9	5.0	31.5
	7	57	6.4	6.4	37.9
	8	32	3.6	3.6	41.5
	9	26	2.9	2.9	44.4
	10	88	9.9	9.9	54.3
	11	20	2.2	2.3	56.6
	12	38	4.3	4.3	60.9
	13	17	1.9	1.9	62.8
	14	18	2.0	2.0	64.8
	15	52	5.8	5.9	70.7
	16	20	2.2	2.3	72.9
	17	14	1.6	1.6	74.5
	18	16	1.8	1.8	76.3
	19	11	1.2	1.2	77.6
	20	54	6.1	6.1	83.7
	21	8	.9	.9	84.6
	22	13	1.5	1.5	86.0
	23	10	1.1	1.1	87.1
	24	7	.8	.8	87.9
	25	29	3.3	3.3	91.2

		Frequency	Percent	Valid Percent	Cumulative Percent
	26	2	.2	.2	91.4
	27	11	1.2	1.2	92.7
	28	9	1.0	1.0	93.7
	29	5	.6	.6	94.3
	30	22	2.5	2.5	96.7
	31	4	.4	.5	97.2
	32	3	.3	.3	97.5
	33	2	.2	.2	97.7
	34	3	.3	.3	98.1
	35	5	.6	.6	98.6
	36	1	.1	.1	98.8
	37	1	.1	.1	98.9
	38	1	.1	.1	99.0
	40	2	.2	.2	99.2
	41	1	.1	.1	99.3
	42	1	.1	.1	99.4
	44	1	.1	.1	99.5
	45	1	.1	.1	99.7
	46	1	.1	.1	99.8
	48	1	.1	.1	99.9
	55	1	.1	.1	100.0
	Total	887	99.6	100.0	
Missing	System	4	.4		
Total		891	100.0		

Table 14

Descriptive Statistics for Q11: For how many years have you been performing physical examinations for CMV drivers?

N	Valid	887
	Missing	4
Mean		12.19
Median		10.00
Std. Deviation		9.05
Minimum		0
Maximum		55

Table 15

Q12: Which of the following best describes the community in which you practice?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	318	35.7	36.2	36.2
	Suburban	309	34.7	35.2	71.4
	Urban	250	28.1	28.5	99.9
	Multiple Responses	1	.1	.1	100.0
	Total	878	98.5	100.0	
Missing	System	13	1.5		
Total		891	100.0		

Table 16

Q13: In what ZIP code do you primarily practice?

Responses were recoded to identify states.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FL	59	6.6	6.7	6.7
	TX	54	6.1	6.2	12.9
	CA	44	4.9	5.0	17.9
	MI	39	4.4	4.4	22.3
	NC	38	4.3	4.3	26.7
	MN	36	4.0	4.1	30.8
	NY	35	3.9	4.0	34.7
	OH	33	3.7	3.8	38.5
	WA	33	3.7	3.8	42.3
	PA	28	3.1	3.2	45.4
	WI	28	3.1	3.2	48.6
	IN	27	3.0	3.1	51.7
	TN	26	2.9	3.0	54.7
	KY	24	2.7	2.7	57.4
	IL	24	2.7	2.7	60.1
	CO	24	2.7	2.7	62.9
	IA	22	2.5	2.5	65.4
	NJ	19	2.1	2.2	67.5
	AZ	19	2.1	2.2	69.7
	MO	18	2.0	2.1	71.8
	OR	18	2.0	2.1	73.8
	GA	17	1.9	1.9	75.7
	LA	15	1.7	1.7	77.4
	MA	13	1.5	1.5	78.9
	SD	13	1.5	1.5	80.4

		Frequency	Percent	Valid Percent	Cumulative Percent
	OK	13	1.5	1.5	81.9
	CT	11	1.2	1.3	83.1
	SC	11	1.2	1.3	84.4
	MT	11	1.2	1.3	85.6
	KS	10	1.1	1.1	86.8
	UT	10	1.1	1.1	87.9
	MD	8	.9	.9	88.8
	VA	8	.9	.9	89.7
	NE	8	.9	.9	90.7
	NM	8	.9	.9	91.6
	NV	8	.9	.9	92.5
	ME	7	.8	.8	93.3
	AL	7	.8	.8	94.1
	DC	6	.7	.7	94.8
	AR	6	.7	.7	95.4
	WY	6	.7	.7	96.1
	MS	5	.6	.6	96.7
	AK	5	.6	.6	97.3
	NH	4	.4	.5	97.7
	DE	4	.4	.5	98.2
	WV	4	.4	.5	98.6
	ND	4	.4	.5	99.1
	ID	4	.4	.5	99.5
	HI	2	.2	.2	99.8
	RI	1	.1	.1	99.9
	VT	1	.1	.1	100.0
	Total	878	98.5	100.0	
Missing	System	13	1.5		
Total		891	100.0		

**Note.* All 50 states and the District of Columbia are represented.

Table 17

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? - APN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	395	44.3	51.7	51.7
	1	123	13.8	16.1	67.8
	2	85	9.5	11.1	78.9
	3	49	5.5	6.4	85.3
	4	20	2.2	2.6	88.0
	5	31	3.5	4.1	92.0
	6	10	1.1	1.3	93.3
	7	3	.3	.4	93.7
	8	6	.7	.8	94.5
	10	21	2.4	2.7	97.3
	15	2	.2	.3	97.5
	16	1	.1	.1	97.6
	20	4	.4	.5	98.2
	25	3	.3	.4	98.6
	30	1	.1	.1	98.7
	39	1	.1	.1	98.8
	40	3	.3	.4	99.2
	50	3	.3	.4	99.6
	60	1	.1	.1	99.7
	99	2	.2	.3	100.0
	Total	764	85.7	100.0	
Missing	System	127	14.3		
Total		891	100.0		

Table 18

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? - DC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	571	64.1	78.5	78.5
	1	44	4.9	6.1	84.6
	2	34	3.8	4.7	89.3
	3	18	2.0	2.5	91.7
	4	12	1.3	1.7	93.4
	5	9	1.0	1.2	94.6
	6	3	.3	.4	95.0
	7	1	.1	.1	95.2
	8	1	.1	.1	95.3
	9	1	.1	.1	95.5
	10	14	1.6	1.9	97.4
	11	1	.1	.1	97.5
	12	2	.2	.3	97.8
	15	3	.3	.4	98.2
	20	4	.4	.6	98.8
	22	1	.1	.1	98.9
	25	2	.2	.3	99.2
	30	2	.2	.3	99.4
	34	1	.1	.1	99.6
	45	1	.1	.1	99.7
	50	1	.1	.1	99.9
	60	1	.1	.1	100.0
	Total	727	81.6	100.0	
Missing	System	164	18.4		
Total		891	100.0		

Table 19

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – DO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	369	41.4	48.6	48.6
	1	156	17.5	20.5	69.1
	2	93	10.4	12.2	81.3
	3	41	4.6	5.4	86.7
	4	24	2.7	3.2	89.9
	5	19	2.1	2.5	92.4
	6	7	.8	.9	93.3
	7	1	.1	.1	93.4
	8	5	.6	.7	94.1
	9	1	.1	.1	94.2
	10	22	2.5	2.9	97.1
	12	2	.2	.3	97.4
	14	1	.1	.1	97.5
	17	1	.1	.1	97.6
	19	1	.1	.1	97.8
	20	6	.7	.8	98.6
	25	2	.2	.3	98.8
	30	1	.1	.1	98.9
	50	5	.6	.7	99.6
	99	3	.3	.4	100.0
	Total	760	85.3	100.0	
Missing	System	131	14.7		
Total		891	100.0		

Table 20

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – MD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	147	16.5	17.8	17.8
	1	81	9.1	9.8	27.6
	2	102	11.4	12.4	40.0
	3	77	8.6	9.3	49.3
	4	68	7.6	8.2	57.6
	5	80	9.0	9.7	67.3
	6	39	4.4	4.7	72.0
	7	15	1.7	1.8	73.8

		Frequency	Percent	Valid Percent	Cumulative Percent
	8	17	1.9	2.1	75.9
	9	8	.9	1.0	76.8
	10	69	7.7	8.4	85.2
	12	11	1.2	1.3	86.5
	13	4	.4	.5	87.0
	14	1	.1	.1	87.2
	15	16	1.8	1.9	89.1
	18	4	.4	.5	89.6
	19	2	.2	.2	89.8
	20	38	4.3	4.6	94.4
	21	2	.2	.2	94.7
	22	1	.1	.1	94.8
	25	6	.7	.7	95.5
	27	1	.1	.1	95.6
	29	1	.1	.1	95.8
	30	6	.7	.7	96.5
	31	1	.1	.1	96.6
	33	1	.1	.1	96.7
	35	1	.1	.1	96.8
	40	1	.1	.1	97.0
	45	1	.1	.1	97.1
	50	12	1.3	1.5	98.5
	52	1	.1	.1	98.7
	70	1	.1	.1	98.8
	75	2	.2	.2	99.0
	99	8	.9	1.0	100.0
	Total	825	92.6	100.0	
Missing	System	66	7.4		
Total		891	100.0		

Table 21

Q14: How many people in each of the following groups do you know who also perform CMV physical examinations? – PA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	309	34.7	39.7	39.7
	1	110	12.3	14.1	53.9
	2	113	12.7	14.5	68.4
	3	51	5.7	6.6	74.9
	4	28	3.1	3.6	78.5
	5	50	5.6	6.4	85.0
	6	26	2.9	3.3	88.3
	7	7	.8	.9	89.2
	8	5	.6	.6	89.8
	9	1	.1	.1	90.0
	10	37	4.2	4.8	94.7
	12	7	.8	.9	95.6
	14	1	.1	.1	95.8
	15	6	.7	.8	96.5
	16	1	.1	.1	96.7
	20	9	1.0	1.2	97.8
	21	1	.1	.1	97.9
	25	3	.3	.4	98.3
	26	1	.1	.1	98.5
	28	1	.1	.1	98.6
	30	2	.2	.3	98.8
	40	1	.1	.1	99.0
	50	2	.2	.3	99.2
	60	2	.2	.3	99.5
	66	1	.1	.1	99.6
	90	1	.1	.1	99.7
	99	2	.2	.3	100.0
	Total	778	87.3	100.0	
Missing	System	113	12.7		
Total		891	100.0		

Table 22

Descriptive Statistics for Q14: How many people in each of the following groups do you know who also perform CMV physical examinations?

		APN	DC	DO	MD	PA
N	Valid	764	727	760	825	778
	Missing	127	164	131	66	113
Mean		2.37	1.27	2.36	7.31	3.45
Median		.00	.00	1.00	4.00	1.00
Std. Deviation		7.49	4.81	7.95	13.06	8.54
Minimum		0	0	0	0	0
Maximum		99	60	99	99	99

Table 23

Q15: What was the year of your birth?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1925	1	.1	.1	.1
	1930	2	.2	.3	.4
	1931	2	.2	.3	.7
	1932	2	.2	.3	1.0
	1935	3	.3	.4	1.4
	1936	2	.2	.3	1.7
	1937	4	.4	.6	2.2
	1938	2	.2	.3	2.5
	1939	2	.2	.3	2.8
	1940	3	.3	.4	3.2
	1941	6	.7	.8	4.0
	1942	9	1.0	1.2	5.2
	1943	15	1.7	2.1	7.3
	1944	12	1.3	1.7	9.0
	1945	14	1.6	1.9	10.9
	1946	17	1.9	2.3	13.3
	1947	25	2.8	3.5	16.7
	1948	23	2.6	3.2	19.9
	1949	22	2.5	3.0	22.9
	1950	16	1.8	2.2	25.1
	1951	34	3.8	4.7	29.8
	1952	33	3.7	4.6	34.4
	1953	36	4.0	5.0	39.4
	1954	40	4.5	5.5	44.9
	1955	36	4.0	5.0	49.9
	1956	35	3.9	4.8	54.7

		Frequency	Percent	Valid Percent	Cumulative Percent
	1957	28	3.1	3.9	58.6
	1958	33	3.7	4.6	63.1
	1959	18	2.0	2.5	65.6
	1960	23	2.6	3.2	68.8
	1961	18	2.0	2.5	71.3
	1962	20	2.2	2.8	74.0
	1963	16	1.8	2.2	76.2
	1964	15	1.7	2.1	78.3
	1965	22	2.5	3.0	81.4
	1966	17	1.9	2.3	83.7
	1967	15	1.7	2.1	85.8
	1968	15	1.7	2.1	87.8
	1969	11	1.2	1.5	89.4
	1970	18	2.0	2.5	91.9
	1971	10	1.1	1.4	93.2
	1972	9	1.0	1.2	94.5
	1973	8	.9	1.1	95.6
	1974	3	.3	.4	96.0
	1975	7	.8	1.0	97.0
	1976	7	.8	1.0	97.9
	1977	6	.7	.8	98.8
	1978	2	.2	.3	99.0
	1979	2	.2	.3	99.3
	1980	3	.3	.4	99.7
	1981	1	.1	.1	99.9
	1982	1	.1	.1	100.0
	Total	724	81.3	100.0	
Missing	System	167	18.7		
Total		891	100.0		

Table 24
Q16: What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	296	33.2	33.8	33.8
	Male	579	65.0	66.2	100.0
	Total	875	98.2	100.0	
Missing	System	16	1.8		
Total		891	100.0		

Table 25

Q17: With which of the following ethnic and racial groups do you most closely identify?

			Ethnicity		
			Hispanic	Non-Hispanic	Total
Race	American Indian or Alaska Native	Count	4	10	14
		% of Cases	.5%	1.2%	1.7%
	Asian	Count	2	29	31
		% of Cases	.2%	3.4%	3.6%
	Black or African American	Count	7	21	28
		% of Cases	.8%	2.5%	3.3%
	Native Hawaiian or Pacific Islander	Count	0	1	1
		% of Cases	.0%	.1%	.1%
	White	Count	71	723	794
		% of Cases	8.4%	85.8%	94.2%
Total		Count	84	784	868
		% of Cases	9.9%	93.0%	*

**Note.* Because participants were allowed to choose more than one answer, responses will not sum to 100%.

APPENDIX F

Comparisons between Respondents to the Full and Follow-Up Surveys

Table 1

Question #1 Comparison

			Survey		
			Full Survey	Follow-up Survey	Total
Which of the following is your profession?	APN	Count	444	181	625
		Expected Count	448.3	176.7	625.0
		% within Survey	19.7%	20.4%	19.9%
		Adjusted Residual	-.4	.4	
	DC	Count	339	160	499
		Expected Count	357.9	141.1	499.0
		% within Survey	15.0%	18.0%	15.9%
		Adjusted Residual	-2.0	2.0	
	DO	Count	185	98	283
		Expected Count	203.0	80.0	283.0
		% within Survey	8.2%	11.0%	9.0%
		Adjusted Residual	-2.5	2.5	
	MD	Count	587	190	777
		Expected Count	557.3	219.7	777.0
		% within Survey	26.0%	21.4%	24.7%
		Adjusted Residual	2.7	-2.7	
	PA	Count	693	256	949
		Expected Count	680.7	268.3	949.0
		% within Survey	30.7%	28.8%	30.2%
		Adjusted Residual	1.1	-1.1	
	Other	Count	7	4	11
		Expected Count	7.9	3.1	11.0
		% within Survey	.3%	.4%	.3%
		Adjusted Residual	-.6	.6	
Total		Count	2255	889	3144
		Expected Count	2255.0	889.0	3144.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi-Square = 16.05, *df* = 5, *p* = .007					

An adjusted residual with an absolute value of 2 or more identifies a group with differences between these two survey samples when the Chi-Square test was significant (Agresti, 1996, pp. 31-32).

Table 2

Question #2 Comparison

For how many years have you been working in your current profession?	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	.253	.615	-.021	3123	.984	-.008	.403	-.799	.783

Table 3

Descriptive Statistics Comparison for Question #2

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
For how many years have you been working in your current profession?	Full Survey	2240	17.31	10.106	.214	17.73	16.89
	Follow-up Survey	885	17.32	10.289	.346	18.00	16.64

Table 4

Question #3 Comparison

			Survey		
			Full Survey	Follow-up Survey	Total
Which of the following best describes your primary job function?	Administration	Count	37	16	53
		Expected Count	38.0	15.0	53.0
		% within Survey	1.6%	1.8%	1.7%
		Adjusted Residual	-.3	.3	
	Clinical	Count	2151	840	2991
		Expected Count	2144.8	846.2	2991.0
		% within Survey	95.3%	94.4%	95.1%
		Adjusted Residual	1.1	-1.1	
	Consultant	Count	21	14	35
		Expected Count	25.1	9.9	35.0
		% within Survey	.9%	1.6%	1.1%
		Adjusted Residual	-1.5	1.5	
	Education	Count	20	5	25
		Expected Count	17.9	7.1	25.0
		% within Survey	.9%	.6%	.8%
		Adjusted Residual	.9	-.9	
	Research	Count	2	0	2
		Expected Count	1.4	.6	2.0
		% within Survey	.1%	.0%	.1%
		Adjusted Residual	.9	-.9	
	Other	Count	19	13	32
		Expected Count	22.9	9.1	32.0
		% within Survey	.8%	1.5%	1.0%
		Adjusted Residual	-1.6	1.6	
	Multiple Responses	Count	6	2	8
		Expected Count	5.7	2.3	8.0
		% within Survey	.3%	.2%	.3%
		Adjusted Residual	.2	-.2	
Total		Count	2256	890	3146
		Expected Count	2256.0	890.0	3146.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = 6.60, df = 6, p = .36					

Table 5

Question #4 Comparison

			Survey		
			Full Survey	Follow-up Survey	Total
In what type of healthcare environment do you work?	Academic	Count	29	11	40
		Expected Count	28.6	11.4	40.0
		% within Survey	1.3%	1.2%	1.3%
		Adjusted Residual	.1	-.1	
	Group practice	Count	758	304	1062
		Expected Count	759.7	302.3	1062.0
		% within Survey	33.9%	34.2%	34.0%
		Adjusted Residual	-.1	.1	
	Hospital	Count	207	69	276
		Expected Count	197.4	78.6	276.0
		% within Survey	9.3%	7.8%	8.8%
		Adjusted Residual	1.3	-1.3	
	Industry / on-site	Count	134	42	176
		Expected Count	125.9	50.1	176.0
		% within Survey	6.0%	4.7%	5.6%
		Adjusted Residual	1.4	-1.4	
	Military	Count	10	8	18
		Expected Count	12.9	5.1	18.0
		% within Survey	.4%	.9%	.6%
		Adjusted Residual	-1.5	1.5	
	Multi-specialty	Count	107	40	147
		Expected Count	105.2	41.8	147.0
		% within Survey	4.8%	4.5%	4.7%
		Adjusted Residual	.3	-.3	
	Solo practice	Count	502	249	751
		Expected Count	537.3	213.7	751.0
		% within Survey	22.4%	28.0%	24.0%
		Adjusted Residual	-3.3	3.3	
	Urgent care	Count	182	64	246
		Expected Count	176.0	70.0	246.0
		% within Survey	8.1%	7.2%	7.9%
		Adjusted Residual	.9	-.9	
	Other	Count	252	101	353
		Expected Count	252.5	100.5	353.0
		% within Survey	11.3%	11.3%	11.3%
		Adjusted Residual	-.1	.1	
	Multiple Responses	Count	56	2	58
		Expected Count	41.5	16.5	58.0
		% within Survey	2.5%	.2%	1.9%
		Adjusted Residual	4.3	-4.3	
Total		Count	2237	890	3127
		Expected Count	2237.0	890.0	3127.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = 32.53, *df* = 9, *p* < .001					

An adjusted residual with an absolute value of 2 or more identifies a group with differences between these two survey samples when the Chi-Square test was significant (Agresti, 1996, pp. 31-32).

Table 6

Question #5 Comparison

			Survey		
			Full Survey	Follow-up Survey	Total
Is occupational health your primary work responsibility?	No	Count	1123	528	1651
		Expected Count	1184.9	466.1	1651.0
		% within Survey	49.9%	59.7%	52.7%
		Adjusted Residual	-4.9	4.9	
	Yes	Count	1127	357	1484
		Expected Count	1065.1	418.9	1484.0
		% within Survey	50.1%	40.3%	47.3%
		Adjusted Residual	4.9	-4.9	
Total		Count	2250	885	3135
		Expected Count	2250.0	885.0	3135.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = 24.22, *df* = 1, *p* < .001					

An adjusted residual with an absolute value of 2 or more identifies a group with differences between these two survey samples when the Chi-Square test was significant (Agresti, 1996, pp. 31-32).

Table 7

Question #6 Comparison

			Survey		
			Full Survey	Follow-up Survey	Total
Have you had training in occupational health?	No	Count	745	331	1076
		Expected Count	771.0	305.0	1076.0
		% within Survey	33.3%	37.4%	34.4%
		Adjusted Residual	-2.2	2.2	
	Yes	Count	1495	555	2050
		Expected Count	1469.0	581.0	2050.0
		% within Survey	66.7%	62.6%	65.6%
		Adjusted Residual	2.2	-2.2	
Total		Count	2240	886	3126
		Expected Count	2240.0	886.0	3126.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = 4.73, *df* = 1, *p* = .03					

An adjusted residual with an absolute value of 2 or more identifies a group with differences between these two survey samples when the Chi-Square test was significant (Agresti, 1996, pp. 31-32).

Table 8

Question #7 Comparison

			Survey		
			Full Survey	Follow-up Survey	Total
Have you attended a training course for CMV driver physical examinations?	No	Count	1615	654	2269
		Expected Count	1625.7	643.3	2269.0
		% within Survey	72.3%	74.0%	72.8%
		Adjusted Residual	-1.0	1.0	
	Yes	Count	619	230	849
		Expected Count	608.3	240.7	849.0
		% within Survey	27.7%	26.0%	27.2%
		Adjusted Residual	1.0	-1.0	
Total		Count	2234	884	3118
		Expected Count	2234.0	884.0	3118.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = .91, *df* = 1, *p* = .34					

Table 9

Question #8 Comparison

			Survey	
			Full Survey	Follow-up Survey
If yes, did you take your course from any of the following organizations?	American Academy of Physician Assistants National Conference	Count	64	23
		% within Survey	10.4%	10.1%
	American College of Occupational and Environmental Medicine	Count	342	113
		% within Survey	55.5%	49.6%
	Concentra	Count	112	41
		% within Survey	18.2%	18.0%
	Intermountain Health Care	Count	4	3
		% within Survey	.6%	1.3%
	National University of Health Sciences	Count	25	10
		% within Survey	4.1%	4.4%
	Other	Count	121	59
		% within Survey	19.6%	25.9%

**Note.* No totals or significance test results are reported for multiple response question comparisons

Table 10
Question #9 Comparison

			Survey	
			Full Survey	Follow-up Survey
To what materials do you typically refer when performing a physical exam for CMV drivers?	Consensus reports from specialty organizations	Count	560	193
		% within Survey	25.4%	22.7%
	Federal Register notices	Count	650	254
		% within Survey	29.5%	29.9%
	Hartenbaum: The DOT Medical Exam	Count	1359	478
		% within Survey	61.6%	56.3%
	Wittels: Concentra Guide	Count	166	57
		% within Survey	7.5%	6.7%
	DOT web site	Count	1261	470
		% within Survey	57.2%	55.4%
	NTIS web site	Count	166	54
		% within Survey	7.5%	6.4%
	Other (general)	Count	215	101
		% within Survey	9.8%	11.9%
	FMCSA web site	Count	917	275
		% within Survey	41.6%	32.4%
	NRCME web site	Count	268	118
		% within Survey	12.2%	13.9%
	Federal Motor Carrier safety regulations	Count	1265	417
		% within Survey	57.4%	49.1%
	Medical report form	Count	660	239
		% within Survey	29.9%	28.2%
	Medical advisory criteria	Count	508	141
		% within Survey	23.0%	16.6%
	Medical conference reports	Count	371	125
		% within Survey	16.8%	14.7%
	Telephone support	Count	318	124
		% within Survey	14.4%	14.6%
	Other (FMCSA)	Count	54	29
		% within Survey	2.4%	3.4%

**Note.* No totals or significance test results are reported for multiple response question comparisons

Table 11

Question #10 Comparison

On average, how many physical examinations for CMV drivers do you personally perform each month?	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	2.055	.152	2.493	3107	.013	7.402	2.969	1.581	13.223

Table 12

Descriptive Statistics Comparison for Question #10

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
On average, how many physical examinations for CMV drivers do you personally perform each month?	Full Survey	2231	43.50	76.501	1.620	46.68	40.32
	Follow-up Survey	878	36.10	69.212	2.336	40.68	31.51

Table 13

Question #11 Comparison

For how many years have you been performing physical examinations for CMV drivers?	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	4.414	.036	-.147	3093	.883	-.050	.342	-.722	.621
Equal variances not assumed			-.142	1536.681	.887	-.050	.353	-.743	.642

**Note.* Variances between the groups are not assumed to be equal.

Table 14

Descriptive Statistics Comparison for Question #11

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
For how many years have you been performing physical examinations for CMV drivers?	Full Survey	2208	12.14	8.434	.179	12.49	11.78
	Follow-up Survey	887	12.19	9.052	.304	12.78	11.59

Table 15

Question #12 Comparison

			Survey		Total
			Full Survey	Follow-up Survey	
Which of the following best describes the community in which you practice?	Rural	Count	773	318	1091
		Expected Count	783.3	307.7	1091.0
		% within Survey	34.6%	36.2%	35.0%
		Adjusted Residual	-.9	.9	
	Suburban	Count	805	309	1114
		Expected Count	799.8	314.2	1114.0
		% within Survey	36.0%	35.2%	35.8%
		Adjusted Residual	.4	-.4	
	Urban	Count	654	250	904
		Expected Count	649.0	255.0	904.0
		% within Survey	29.3%	28.5%	29.0%
		Adjusted Residual	.4	-.4	
	Multiple Responses	Count	3	1	4
		Expected Count	2.9	1.1	4.0
		% within Survey	.1%	.1%	.1%
		Adjusted Residual	.1	-.1	
Total		Count	2235	878	3113
		Expected Count	2235.0	878.0	3113.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = .75, *df* = 3, *p* = .86					

Table 16

Question #13 Comparison

			Survey		Total
			Full Survey	Follow-up Survey	
Region	Eastern	Count	466	149	615
		Expected Count	443.1	171.9	615.0
		% within Survey	20.3%	16.7%	19.3%
		Adjusted Residual	2.3	-2.3	
	Southern	Count	630	283	913
		Expected Count	657.8	255.2	913.0
		% within Survey	27.4%	31.8%	28.6%
		Adjusted Residual	-2.4	2.4	
	Midwestern	Count	661	245	906
		Expected Count	652.8	253.2	906.0
		% within Survey	28.8%	27.5%	28.4%
		Adjusted Residual	.7	-.7	
	Western	Count	465	201	666
		Expected Count	479.9	186.1	666.0
		% within Survey	20.2%	22.6%	20.9%
		Adjusted Residual	-1.4	1.4	
	No Response	Count	75	13	88
		Expected Count	63.4	24.6	88.0
		% within Survey	3.3%	1.5%	2.8%
		Adjusted Residual	2.8	-2.8	
Total		Count	2297	891	3188
		Expected Count	2297.0	891.0	3188.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = 18.04, df = 4, p = .001					

An adjusted residual with an absolute value of 2 or more identifies a group with differences between these two survey samples when the Chi-Square test was significant (Agresti, 1996, pp. 31-32).

Table 17

Question #14 Comparison – APN

How many people in each of the following groups do you know who perform CMV physical examinations? - APN	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	.060	.806	-.239	2811	.811	-.075	.315	-.694	.543

Table 18

Descriptive Statistics Comparison for Question #14 - APN

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
How many people in each of the following groups do you know who perform CMV physical examinations? - APN	Full Survey	2049	2.30	7.422	.164	2.62	1.97
	Follow-up Survey	764	2.37	7.489	.271	2.90	1.84

Table 19

Question #14 Comparison – DC

How many people in each of the following groups do you know who perform CMV physical examinations? - DC	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	.337	.562	.085	2764	.933	.021	.244	-.458	.499

Table 20

Descriptive Statistics Comparison for Question #14 - DC

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
How many people in each of the following groups do you know who perform CMV physical examinations? - DC	Full Survey	2039	1.29	5.921	.131	1.55	1.03
	Follow-up Survey	727	1.27	4.809	.178	1.62	.92

Table 21

Question #14 Comparison – DO

How many people in each of the following groups do you know who perform CMV physical examinations? - DO	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	1.619	.203	-.715	2805	.474	-.206	.287	-.769	.358

Table 22

Descriptive Statistics Comparison for Question #14 - DO

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
How many people in each of the following groups do you know who perform CMV physical examinations? - DO	Full Survey	2047	2.16	6.265	.138	2.43	1.88
	Follow-up Survey	760	2.36	7.953	.288	2.93	1.80

Table 23

Question #14 Comparison – MD

How many people in each of the following groups do you know who perform CMV physical examinations? - MD	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	4.410	.036	2.536	2890	.011	1.476	.582	.335	2.617
Equal variances not assumed			2.655	1677.742	.008	1.476	.556	.386	2.566

**Note.* Variances between the groups are not assumed to be equal.

Table 24

Descriptive Statistics Comparison for Question #14 - MD

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
How many people in each of the following groups do you know who perform CMV physical examinations? - MD	Full Survey	2067	8.79	14.541	.320	9.41	8.16
	Follow-up Survey	825	7.31	13.057	.455	8.20	6.42

Table 25

Question #14 Comparison – PA

How many people in each of the following groups do you know who perform CMV physical examinations? - PA	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	2.057	.152	-.538	2829	.591	-.173	.322	-.806	.459

Table 26

Descriptive Statistics Comparison for Question #14 - PA

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
How many people in each of the following groups do you know who perform CMV physical examinations? - PA	Full Survey	2053	3.28	7.298	.161	3.59	2.56
	Follow-up Survey	778	3.45	8.542	.306	4.05	2.85

Table 27

Question #15 Comparison

What was the year of your birth?	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
Equal variances assumed	.000	.983	.556	2908	.578	.227	.407	-.572	1.025

Table 28

Descriptive Statistics Comparison for Question #15

	Survey	N	Mean	SD	SE Mean	95% Confidence Interval of the Mean	
						Upper	Lower
What was the year of your birth?	Full Survey	2186	1956.70	9.502	.203	1957.10	1956.30
	Follow-up Survey	724	1956.48	9.500	.353	1957.17	1955.78

Table 29

Question #16 Comparison

			Survey		Total
			Full Survey	Follow-up Survey	
What is your gender?	Female	Count	771	296	1067
		Expected Count	755.7	311.3	1067.0
		% within Survey	36.3%	33.8%	35.6%
		Adjusted Residual	1.3	-1.3	
	Male	Count	1353	579	1932
		Expected Count	1368.3	563.7	1932.0
		% within Survey	63.7%	66.2%	64.4%
		Adjusted Residual	-1.3	1.3	
Total		Count	2124	875	2999
		Expected Count	2124.0	875.0	2999.0
		% within Survey	100.0%	100.0%	100.0%
Pearson Chi Square = 1.65, df = 1, p = .20					

Table 30

Question #17 Comparison

			Full Survey		Follow-up Survey	
			Hispanic	Non-Hispanic	Hispanic	Non-Hispanic
With which of the following ethnic and racial groups do you most closely identify?	American Indian or Alaska Native	Count	13	31	4	10
		% within Survey	.6%	1.4%	.5%	1.2%
	Asian	Count	15	58	2	29
		% within Survey	.7%	2.7%	.2%	3.4%
	Black or African American	Count	31	58	7	21
		% within Survey	1.4%	2.7%	.8%	2.5%
	Native Hawaiian or Other Pacific Islander	Count	3	16	0	1
		% within Survey	.1%	.7%	.0%	.1%
	White	Count	148	1913	71	723
		% within Survey	6.9%	88.7%	8.4%	85.8%

**Note.* No totals or significance test results are reported for multiple response question comparison.

APPENDIX G

Extent Analysis
Percentages in Ascending Order for the Whole Sample of Respondents Performing Each Task
(Data for Exclusion Rule 1)

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
106	Include if available documentation of intracity zone exemption	1514	3.16	0.02	0.95	709	68.11
123	Review Skill Performance Evaluation (SPE) cases: ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	1605	3.52	0.02	0.74	629	71.84
122	Review Skill Performance Evaluation (SPE) cases: identify terms, conditions, and limitations set forth in a driver's SPE Certificate	1648	3.38	0.02	0.81	618	72.73
89	Obtain additional information when indicated by other tests	1613	2.70	0.02	0.99	484	76.92
105	Include if available a current skill performance evaluation certificate	1751	3.25	0.02	0.91	515	77.27
119	Advise a driver with a diabetes exemption, he / she should plan to submit glucose monitoring logs for each annual recertification	1766	3.36	0.02	0.88	475	78.80
108	Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with prohibited drug use who shows evidence he or she is now free from such use	1791	3.56	0.02	0.73	464	79.42
107	Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with alcoholism who completed counseling and treatment to the point of full recovery	1801	3.54	0.02	0.75	465	79.48
88	Obtain additional information when indicated by drug level monitoring (e.g., digoxin, theophylline)	1799	2.93	0.02	0.97	456	79.78
117	Advise a driver with a diabetes exemption, he / she should self-monitor blood glucose one hour before driving and at least once every four hours while driving	1850	3.43	0.02	0.79	415	81.68
100	Record / include results as available with other information about the driver, which may include other tests	1766	2.71	0.02	1.02	388	81.99
99	Record / include results as available with other information about the driver, which may include drug level monitoring (e.g., digoxin, theophylline)	1851	2.89	0.02	0.98	396	82.38
132	Support the rationale for using FMCSA guidelines that have not been published in regulations yet	1855	3.19	0.02	0.87	393	82.52
124	Consider a driver's cognitive ability to…	1885	3.25	0.02	0.89	361	83.93
85	Obtain additional information when indicated by chest radiograph	1931	2.72	0.02	0.99	326	85.56
86	Obtain additional information when indicated by respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	1944	2.84	0.02	0.96	326	85.64
113	Advise a driver with a hearing aid he / she should possess a spare power source for the device while driving	1937	3.07	0.02	0.92	324	85.67
116	Advise a driver with a diabetes exemption, he / she should possess a rapidly absorbable form of glucose while driving	1940	3.63	0.01	0.65	322	85.76
118	Advise a driver with a diabetes exemption, he / she should comply with each condition of his / her exemption	1934	3.64	0.01	0.64	318	85.88

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
128	Consider general health and wellness factors such as stressors likely associated with extended time away from a driver's social support system	1918	2.62	0.02	0.99	311	86.05
96	Record / include results as available with other information about the driver, which may include chest radiograph	1947	2.64	0.02	1.02	313	86.15
129	Consider general health and wellness factors such as short- and long-term health effects of stress from	1957	2.78	0.02	0.98	288	87.17
87	Obtain additional information when indicated by sleep studies	1973	3.27	0.02	0.89	288	87.26
104	Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's / optometrist's report as required	2001	3.58	0.02	0.72	267	88.23
91	Refer a driver with limitations in extremity movement for an on-road performance evaluation and / or skill performance evaluation	2011	3.60	0.01	0.65	268	88.24
84	Obtain additional information when indicated by blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2017	3.03	0.02	0.93	259	88.62
97	Record / include results as available with other information about the driver, which may include respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	2016	2.82	0.02	0.98	256	88.73
112	Advise a driver with contact lenses he or she should carry a pair of glasses while driving	2007	3.13	0.02	0.91	251	88.88
137	Disqualify a driver who is currently taking methadone	2021	3.71	0.01	0.64	251	88.95
95	Record / include results as available with other information about the driver, which may include blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2020	2.90	0.02	0.96	246	89.14
127	Consider general health and wellness factors such as risk factors associated with common dietary choices available to drivers	1992	2.75	0.02	0.97	238	89.33
98	Record / include results as available with other information about the driver, which may include sleep studies	2021	3.27	0.02	0.90	238	89.46
130	Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment	2029	3.30	0.02	0.83	235	89.62
121	Consider a driver's ability to…	2045	3.32	0.02	0.83	233	89.77
125	Consider general health and wellness factors such as adverse health effects associated with rotating work schedules and irregular sleep patterns	2046	3.02	0.02	0.92	216	90.45
138	Disqualify a driver who has a current clinical diagnosis of alcoholism	2064	3.81	0.01	0.50	209	90.81
103	Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption	2064	3.56	0.02	0.75	208	90.85
126	Consider general health and wellness factors such as long-term effects of fatigue associated with extended work hours without breaks	2045	3.09	0.02	0.91	204	90.93
41	Examine the driver's eyes and note fundoscopic examination results	2042	2.84	0.02	0.96	203	90.96

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
114	Advise a driver who has had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	2075	3.31	0.02	0.82	191	91.57
139	Disqualify a driver who uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician	2098	3.91	0.01	0.34	180	92.10
131	Consider for documented conditions the rate of progression, degree of control, and likelihood of sudden incapacitation (e.g., cardiovascular, neurologic, respiratory, musculoskeletal)	2111	3.49	0.02	0.76	153	93.24
83	Obtain additional information when indicated by cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2132	3.56	0.02	0.72	141	93.80
82	Obtain additional information when indicated by audiometrics	2139	3.36	0.02	0.80	138	93.94
101	Record / include results as available with other information about the driver, which may include treating physician's work release	2111	3.37	0.02	0.84	135	93.99
133	Apply nondiscretionary certification standards to disqualify a driver with a history of epilepsy	2136	3.77	0.01	0.55	134	94.10
115	Advise a driver who has diabetes about glucose monitoring frequencies and the minimum threshold while driving	2130	3.51	0.02	0.73	129	94.29
94	Record / include results as available with other information about the driver, which may include cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2151	3.51	0.02	0.73	126	94.47
93	Record / include results as available with other information about the driver, which may include audiometrics	2157	3.40	0.02	0.77	114	94.98
134	Apply nondiscretionary certification standards to disqualify a driver with diabetes requiring insulin control (unless accompanied by an exemption)	2142	3.72	0.01	0.61	109	95.16
92	Refer a driver for conditions not directly related to certification, but detected during the examination	2167	3.07	0.02	0.89	92	95.93
102	Integrate a specialist's evaluation with other information about the driver	2141	3.43	0.02	0.76	90	95.97
136	Apply nondiscretionary certification standards to disqualify a driver when hearing measurements with or without a hearing aid fall below minimum standards	2163	3.56	0.02	0.71	90	96.01
135	Apply nondiscretionary certification standards to disqualify a driver when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption	2197	3.74	0.01	0.54	76	96.66
140	Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists	2207	3.89	0.01	0.36	74	96.76
111	Advise a driver that fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving	2202	3.40	0.02	0.78	65	97.13
1	Verify the identity of the driver	2237	3.73	0.01	0.56	52	97.73

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
31	Ensure the driver is properly clothed for the physical examination	2221	2.68	0.02	1.01	50	97.80
69	Examine the driver's extremities and note handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	2233	3.56	0.01	0.68	50	97.81
55	Examine the driver's lungs, chest, and thorax, excluding breasts, and note scars	2195	2.79	0.02	0.98	48	97.86
74	Examine the driver's neurologic status and note sensory or positional abnormalities	2219	3.38	0.02	0.76	47	97.93
71	Examine the driver's extremities and note leg length discrepancy; lower extremity strength, motion, and function	2220	3.13	0.02	0.88	47	97.93
9	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include limitations placed during prior FMCSA exams	2228	3.67	0.01	0.62	45	98.02
109	Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider	2235	3.57	0.01	0.68	45	98.03
110	a. Advise a driver regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g., antihistamines, cold and cough medications) that could negatively affect his or her driving	2237	3.52	0.02	0.72	40	98.24
56	Examine the driver's abdomen, and note surgical scars	2225	2.69	0.02	0.98	37	98.36
141	Document the reason(s) for the disqualification and / or referral	2214	3.87	0.01	0.36	35	98.44
120	Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include	2238	3.73	0.01	0.55	33	98.55
54	Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal chest wall configuration / palpation	2205	3.00	0.02	0.91	32	98.57
80	Examine the driver's mental status and note cognitive impairment (e.g., orientation, intellect, memory, obsessions, circumstantial / tangential speech)	2247	3.56	0.01	0.68	32	98.60
24	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other endocrine disorders (e.g., thyroid disorders, interventions / treatment)	2255	2.85	0.02	0.85	30	98.69
47	Examine the driver's neck and note soft tissue palpation / examination (e.g., lymph nodes, thyroid gland)	2207	2.78	0.02	0.93	29	98.70
37	Examine the driver's eyes and note presence or absence of monocular vision	2222	3.66	0.01	0.63	29	98.71
142	Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified	2252	3.84	0.01	0.43	29	98.73
48	Examine the driver's heart: chest inspection (e.g., surgical scars, pacemaker / IAD)	2234	3.44	0.02	0.77	27	98.81
76	Examine the driver's neurologic status and note radicular signs	2237	3.20	0.02	0.84	27	98.81
2	Ensure the driver signs the driver's statement about health history	2244	3.42	0.02	0.83	27	98.81

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
81	Examine the driver's mental status and note signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	2249	3.49	0.02	0.72	27	98.81
12	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include weight disorders (e.g., unexplained loss or gain, obesity)	2250	2.96	0.02	0.82	26	98.86
36	Examine the driver's eyes and note color recognition	2223	3.50	0.01	0.70	25	98.89
26	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neoplastic disorders (e.g., leukemia; brain, bone, breast, and lung cancer)	2249	3.19	0.02	0.83	25	98.90
60	Examine the driver's abdomen, and note hernias (e.g., inguinal, umbilical, ventral, femoral)	2208	2.94	0.02	0.94	24	98.92
57	Examine the driver's abdomen, and note an enlarged liver or spleen	2230	3.18	0.02	0.84	23	98.98
70	Examine the driver's extremities and note varicosities, skin abnormalities, and cyanosis, clubbing, or edema	2258	2.96	0.02	0.89	23	98.99
64	Examine the driver's spine and note kyphosis, scoliosis, or other spinal deformities	2224	2.90	0.02	0.90	22	99.02
62	Examine the driver's spine and note tenderness and muscle spasm	2233	3.00	0.02	0.88	22	99.02
61	Examine the driver's spine and note surgical scars and deformities	2236	3.07	0.02	0.90	22	99.03
46	Examine the driver's neck and note range of motion	2240	3.29	0.02	0.79	21	99.07
35	Examine the driver's eyes and note horizontal field of vision in each eye	2233	3.58	0.01	0.63	20	99.11
22	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include genitourinary disorders (e.g., polycystic, nephrotic syndrome, kidney stones, renal failure, hernias)	2253	2.87	0.02	0.90	20	99.12
144	Indicate certification status, which may require…	2245	3.83	0.01	0.45	18	99.20
143	Certify a driver for an appropriate interval	2252	3.78	0.01	0.47	18	99.21
21	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include gastrointestinal disorders (e.g., pancreatitis, ulcers, ulcerative colitis, cirrhosis, hepatitis, irritable bowel syndrome, hernias)	2267	2.85	0.02	0.85	18	99.21
40	Examine the driver's eyes and note evaluation of extraoccular movements	2228	3.28	0.02	0.81	17	99.24
77	Examine the driver's neurologic status and note reflexes (e.g., asymmetric deep-tendon, normal / abnormal patellar and Babinski	2252	3.22	0.02	0.86	17	99.25
145	Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition	2261	3.82	0.01	0.43	17	99.25
78	Test the driver's urine and note specific gravity, protein, blood, and glucose	2237	3.52	0.02	0.75	16	99.29
52	Examine the driver's lungs, chest, and thorax, excluding breasts, and note respiratory rate and pattern	2245	3.29	0.02	0.79	16	99.29

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
72	Examine the driver's neurologic status and note impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)	2262	3.69	0.01	0.58	16	99.30
68	Examine the driver's extremities and note elbow and shoulder strength, function, and mobility	2223	3.40	0.02	0.74	14	99.37
39	Examine the driver's eyes and note evidence of nystagmus and exophthalmos	2230	3.14	0.02	0.85	14	99.38
58	Examine the driver's abdomen, and note abnormal masses or bruits / pulsation	2230	3.43	0.02	0.75	14	99.38
30	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other conditions that could impair a driver's ability to safely function	2260	3.65	0.01	0.59	14	99.38
17	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include hematologic disorders (e.g., bleeding disorders, anemia, cancer, organ transplant history)	2261	3.24	0.02	0.75	14	99.38
42	Examine the driver's ears and note abnormalities of the ear canal and tympanic membrane	2254	2.94	0.02	0.91	13	99.43
73	Examine the driver's neurologic status and note gait disorders	2259	3.31	0.02	0.78	13	99.43
34	Examine the driver's eyes and note whether corrective lenses are required to meet the standard	2249	3.78	0.01	0.49	12	99.47
33	Examine the driver's eyes and note distant acuity in each and both eyes (Snellen comparable values)	2251	3.84	0.01	0.40	12	99.47
59	Examine the driver's abdomen, and note abdominal tenderness	2222	3.13	0.02	0.86	11	99.51
63	Examine the driver's spine and note loss in range of motion and painful motion	2233	3.35	0.02	0.78	11	99.51
43	Examine the driver's ears and note whisper test and / or audiometric results (in ANSI standard units) as indicated	2238	3.55	0.01	0.69	11	99.51
11	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include his or her use of recreational / addictive substances (e.g., nicotine, alcohol, inhalants)	2267	3.67	0.01	0.60	11	99.52
79	Examine the driver's mental status and note comprehension and interaction	2269	3.54	0.01	0.68	10	99.56
90	Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider: vision, cardiac, pulmonary, endocrine, musculoskeletal, neurologic, sleep, mental / emotional health	2271	3.83	0.01	0.43	10	99.56
51	Examine the driver's heart: additional signs of disease (e.g., edema, bruits, diaphoresis, distended neck veins)	2225	3.54	0.01	0.66	8	99.64
45	Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing	2253	3.06	0.02	0.89	8	99.65
32	Record height and weight, and note whether a driver is overweight or underweight	2261	2.89	0.02	0.87	8	99.65
44	Examine the driver's ears and note presence or absence of a hearing aid and whether required to meet the standard	2231	3.59	0.01	0.66	7	99.69

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
65	Examine the driver's extremities and note gait, mobility, and posture while bearing his or her weight; limping or signs of pain	2252	3.36	0.02	0.77	7	99.69
18	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	2257	3.39	0.01	0.70	7	99.69
146	Complete a medical examination report and medical certificate / card	2260	3.84	0.01	0.42	7	99.69
75	Examine the driver's neurologic status and note tremor	2265	3.24	0.02	0.80	7	99.69
29	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include psychiatric disorders (e.g., schizophrenia, depression, anxiety, bipolar, ADHD, interventions / treatment)	2274	3.56	0.01	0.66	7	99.69
49	Examine the driver's heart: thrills, murmurs, extra sounds, and enlargement	2248	3.60	0.01	0.63	6	99.73
27	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include substance use and abuse (e.g., alcohol, narcotics, illicit or legal drugs)	2264	3.83	0.01	0.46	6	99.74
20	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include sleep disorders (e.g., sleep apnea, narcolepsy, insomnia, daytime sleepiness, loud snoring, testing and / or treatments)	2275	3.72	0.01	0.55	6	99.74
67	Examine the driver's extremities and note deformities, atrophy, weakness, paralysis, surgical scars	2234	3.58	0.01	0.64	5	99.78
66	Examine the driver's extremities and note loss, impairment, or use of orthosis	2240	3.59	0.01	0.65	5	99.78
38	Examine the driver's eyes and note reactivity to light and pupillary equality	2247	3.29	0.02	0.81	5	99.78
53	Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal breath sounds	2250	3.43	0.02	0.72	5	99.78
10	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying	2281	3.75	0.01	0.52	5	99.78
8	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any incidents of disability / physical limitations	2273	3.76	0.01	0.50	4	99.82
6	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any recent changes in health status	2277	3.68	0.01	0.52	4	99.82
19	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary diseases (e.g., asthma, chronic lung disorders, tuberculosis, previous pulmonary embolus, pneumothorax)	2278	3.37	0.02	0.72	4	99.82

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
13	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, macular degeneration, monocular vision)	2281	3.76	0.01	0.49	4	99.82
50	Examine the driver's heart: blood pressure and pulse (rate and rhythm)	2243	3.81	0.01	0.43	3	99.87
15	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiac symptoms (e.g., syncope, dyspnea, chest pain, palpitations)	2275	3.87	0.01	0.36	3	99.87
14	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the ears (e.g., hearing loss, hearing aids, vertigo, Meniere's, tinnitus, implants)	2277	3.56	0.01	0.62	3	99.87
23	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include diabetes mellitus	2266	3.80	0.01	0.45	2	99.91
7	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include whether he / she has any medical conditions or current complaints	2279	3.73	0.01	0.50	2	99.91
5	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any other hospitalizations or surgeries	2280	3.30	0.02	0.75	2	99.91
16	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiovascular diseases (e.g., hypertension, congestive heart failure, myocardial infarction, coronary insufficiency, or thrombosis)	2282	3.82	0.01	0.43	2	99.91
25	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include musculoskeletal disorders (e.g., amputations, arthritis, spinal surgery)	2276	3.38	0.02	0.73	1	99.96
4	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any illness, surgery, or injury in the last five years	2281	3.55	0.01	0.62	1	99.96
3	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include specifics regarding any affirmative responses in the history	2287	3.72	0.01	0.49	0	100.00
28	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neurologic disorders (e.g., loss of consciousness, seizures, stroke / TIA, headaches / migraines, numbness / weakness)	2282	3.91	0.01	0.32	0	100.00

APPENDIX H

Importance Analysis
Task Mean Importance Ratings in Ascending Order for the Whole Sample
(Data for Exclusion Rule 2)

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
128	Consider general health and wellness factors such as stressors likely associated with extended time away from a driver's social support system	1918	2.62	0.02	0.99	311	86.05
96	Record / include results as available with other information about the driver, which may include chest radiograph	1947	2.64	0.02	1.02	313	86.15
31	Ensure the driver is properly clothed for the physical examination	2221	2.68	0.02	1.01	50	97.80
56	Examine the driver's abdomen, and note surgical scars	2225	2.69	0.02	0.98	37	98.36
89	Obtain additional information when indicated by other tests	1613	2.70	0.02	0.99	484	76.92
100	Record / include results as available with other information about the driver, which may include other tests	1766	2.71	0.02	1.02	388	81.99
85	Obtain additional information when indicated by chest radiograph	1931	2.72	0.02	0.99	326	85.56
127	Consider general health and wellness factors such as risk factors associated with common dietary choices available to drivers	1992	2.75	0.02	0.97	238	89.33
47	Examine the driver's neck and note soft tissue palpation / examination (e.g., lymph nodes, thyroid gland)	2207	2.78	0.02	0.93	29	98.70
129	Consider general health and wellness factors such as short- and long-term health effects of stress from…	1957	2.78	0.02	0.98	288	87.17
55	Examine the driver's lungs, chest, and thorax, excluding breasts, and note scars	2195	2.79	0.02	0.98	48	97.86
97	Record / include results as available with other information about the driver, which may include respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	2016	2.82	0.02	0.98	256	88.73
86	Obtain additional information when indicated by respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	1944	2.84	0.02	0.96	326	85.64
41	Examine the driver's eyes and note fundoscopic examination results	2042	2.84	0.02	0.96	203	90.96
21	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include gastrointestinal disorders (e.g., pancreatitis, ulcers, ulcerative colitis, cirrhosis, hepatitis, irritable bowel syndrome, hernias)	2267	2.85	0.02	0.85	18	99.21
24	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other endocrine disorders (e.g., thyroid disorders, interventions / treatment)	2255	2.85	0.02	0.85	30	98.69
22	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include genitourinary disorders (e.g., polycystic, nephrotic syndrome, kidney stones, renal failure, hernias)	2253	2.87	0.02	0.90	20	99.12
32	Record height and weight, and note whether a driver is overweight or underweight	2261	2.89	0.02	0.87	8	99.65

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
99	Record / include results as available with other information about the driver, which may include drug level monitoring (e.g., digoxin, theophylline)	1851	2.89	0.02	0.98	396	82.38
95	Record / include results as available with other information about the driver, which may include blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2020	2.90	0.02	0.96	246	89.14
64	Examine the driver's spine and note kyphosis, scoliosis, or other spinal deformities	2224	2.90	0.02	0.90	22	99.02
88	Obtain additional information when indicated by drug level monitoring (e.g., digoxin, theophylline)	1799	2.93	0.02	0.97	456	79.78
42	Examine the driver's ears and note abnormalities of the ear canal and tympanic membrane	2254	2.94	0.02	0.91	13	99.43
60	Examine the driver's abdomen, and note hernias (e.g., inguinal, umbilical, ventral, femoral)	2208	2.94	0.02	0.94	24	98.92
70	Examine the driver's extremities and note varicosities, skin abnormalities, and cyanosis, clubbing, or edema	2258	2.96	0.02	0.89	23	98.99
12	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include weight disorders (e.g., unexplained loss or gain, obesity)	2250	2.96	0.02	0.82	26	98.86
62	Examine the driver's spine and note tenderness and muscle spasm	2233	3.00	0.02	0.88	22	99.02
54	Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal chest wall configuration / palpation	2205	3.00	0.02	0.91	32	98.57
125	Consider general health and wellness factors such as adverse health effects associated with rotating work schedules and irregular sleep patterns	2046	3.02	0.02	0.92	216	90.45
84	Obtain additional information when indicated by blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2017	3.03	0.02	0.93	259	88.62
45	Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing	2253	3.06	0.02	0.89	8	99.65
113	Advise a driver with a hearing aid he / she should possess a spare power source for the device while driving	1937	3.07	0.02	0.92	324	85.67
92	Refer a driver for conditions not directly related to certification, but detected during the examination	2167	3.07	0.02	0.89	92	95.93
61	Examine the driver's spine and note surgical scars and deformities	2236	3.07	0.02	0.90	22	99.03
126	Consider general health and wellness factors such as long-term effects of fatigue associated with extended work hours without breaks	2045	3.09	0.02	0.91	204	90.93
71	Examine the driver's extremities and note leg length discrepancy; lower extremity strength, motion, and function	2220	3.13	0.02	0.88	47	97.93
59	Examine the driver's abdomen, and note abdominal tenderness	2222	3.13	0.02	0.86	11	99.51
112	Advise a driver with contact lenses he or she should carry a pair of glasses while driving	2007	3.13	0.02	0.91	251	88.88
39	Examine the driver's eyes and note evidence of nystagmus and exophthalmos	2230	3.14	0.02	0.85	14	99.38
106	Include if available documentation of intracity zone exemption	1514	3.16	0.02	0.95	709	68.11

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
57	Examine the driver's abdomen, and note an enlarged liver or spleen	2230	3.18	0.02	0.84	23	98.98
132	Support the rationale for using FMCSA guidelines that have not been published in regulations yet	1855	3.19	0.02	0.87	393	82.52
26	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neoplastic disorders (e.g., leukemia; brain, bone, breast, and lung cancer)	2249	3.19	0.02	0.83	25	98.90
76	Examine the driver's neurologic status and note radicular signs	2237	3.20	0.02	0.84	27	98.81
77	Examine the driver's neurologic status and note reflexes (e.g., asymmetric deep-tendon, normal / abnormal patellar and Babinski	2252	3.22	0.02	0.86	17	99.25
17	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include hematologic disorders (e.g., bleeding disorders, anemia, cancer, organ transplant history)	2261	3.24	0.02	0.75	14	99.38
75	Examine the driver's neurologic status and note tremor	2265	3.24	0.02	0.80	7	99.69
105	Include if available a current skill performance evaluation certificate	1751	3.25	0.02	0.91	515	77.27
124	Consider a driver's cognitive ability to…	1885	3.25	0.02	0.89	361	83.93
98	Record / include results as available with other information about the driver, which may include sleep studies	2021	3.27	0.02	0.90	238	89.46
87	Obtain additional information when indicated by sleep studies	1973	3.27	0.02	0.89	288	87.26
40	Examine the driver's eyes and note evaluation of extraoccular movements	2228	3.28	0.02	0.81	17	99.24
52	Examine the driver's lungs, chest, and thorax, excluding breasts, and note respiratory rate and pattern	2245	3.29	0.02	0.79	16	99.29
38	Examine the driver's eyes and note reactivity to light and pupillary equality	2247	3.29	0.02	0.81	5	99.78
46	Examine the driver's neck and note range of motion	2240	3.29	0.02	0.79	21	99.07
130	Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment	2029	3.30	0.02	0.83	235	89.62
5	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any other hospitalizations or surgeries	2280	3.30	0.02	0.75	2	99.91
114	Advise a driver who has had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	2075	3.31	0.02	0.82	191	91.57
73	Examine the driver's neurologic status and note gait disorders	2259	3.31	0.02	0.78	13	99.43
121	Consider a driver's ability to…	2045	3.32	0.02	0.83	233	89.77
63	Examine the driver's spine and note loss in range of motion and painful motion	2233	3.35	0.02	0.78	11	99.51
65	Examine the driver's extremities and note gait, mobility, and posture while bearing his or her weight; limping or signs of pain	2252	3.36	0.02	0.77	7	99.69
82	Obtain additional information when indicated by audiometrics	2139	3.36	0.02	0.80	138	93.94

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
119	Advise a driver with a diabetes exemption, he / she should plan to submit glucose monitoring logs for each annual recertification	1766	3.36	0.02	0.88	475	78.80
19	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary diseases (e.g., asthma, chronic lung disorders, tuberculosis, previous pulmonary embolus, pneumothorax)	2278	3.37	0.02	0.72	4	99.82
101	Record / include results as available with other information about the driver, which may include treating physician's work release	2111	3.37	0.02	0.84	135	93.99
74	Examine the driver's neurologic status and note sensory or positional abnormalities	2219	3.38	0.02	0.76	47	97.93
25	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include musculoskeletal disorders (e.g., amputations, arthritis, spinal surgery)	2276	3.38	0.02	0.73	1	99.96
122	Review Skill Performance Evaluation (SPE) cases: identify terms, conditions, and limitations set forth in a driver's SPE Certificate	1648	3.38	0.02	0.81	618	72.73
18	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	2257	3.39	0.01	0.70	7	99.69
93	Record / include results as available with other information about the driver, which may include audiometrics	2157	3.40	0.02	0.77	114	94.98
111	Advise a driver that fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving	2202	3.40	0.02	0.78	65	97.13
68	Examine the driver's extremities and note elbow and shoulder strength, function, and mobility	2223	3.40	0.02	0.74	14	99.37
2	Ensure the driver signs the driver's statement about health history	2244	3.42	0.02	0.83	27	98.81
53	Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal breath sounds	2250	3.43	0.02	0.72	5	99.78
58	Examine the driver's abdomen, and note abnormal masses or bruits / pulsation	2230	3.43	0.02	0.75	14	99.38
102	Integrate a specialist's evaluation with other information about the driver	2141	3.43	0.02	0.76	90	95.97
117	Advise a driver with a diabetes exemption, he / she should self-monitor blood glucose one hour before driving and at least once every four hours while driving	1850	3.43	0.02	0.79	415	81.68
48	Examine the driver's heart: chest inspection (e.g., surgical scars, pacemaker / IAD)	2234	3.44	0.02	0.77	27	98.81
131	Consider for documented conditions the rate of progression, degree of control, and likelihood of sudden incapacitation (e.g., cardiovascular, neurologic, respiratory, musculoskeletal)	2111	3.49	0.02	0.76	153	93.24
81	Examine the driver's mental status and note signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	2249	3.49	0.02	0.72	27	98.81
36	Examine the driver's eyes and note color recognition	2223	3.50	0.01	0.70	25	98.89

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
115	Advise a driver who has diabetes about glucose monitoring frequencies and the minimum threshold while driving	2130	3.51	0.02	0.73	129	94.29
94	Record / include results as available with other information about the driver, which may include cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2151	3.51	0.02	0.73	126	94.47
123	Review Skill Performance Evaluation (SPE) cases: ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	1605	3.52	0.02	0.74	629	71.84
78	Test the driver's urine and note specific gravity, protein, blood, and glucose	2237	3.52	0.02	0.75	16	99.29
110	a. Advise a driver regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g., antihistamines, cold and cough medications) that could negatively affect his or her driving	2237	3.52	0.02	0.72	40	98.24
51	Examine the driver's heart: additional signs of disease (e.g., edema, bruits, diaphoresis, distended neck veins)	2225	3.54	0.01	0.66	8	99.64
79	Examine the driver's mental status and note comprehension and interaction	2269	3.54	0.01	0.68	10	99.56
107	Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with alcoholism who completed counseling and treatment to the point of full recovery	1801	3.54	0.02	0.75	465	79.48
43	Examine the driver's ears and note whisper test and / or audiometric results (in ANSI standard units) as indicated	2238	3.55	0.01	0.69	11	99.51
4	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any illness, surgery, or injury in the last five years	2281	3.55	0.01	0.62	1	99.96
29	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include psychiatric disorders (e.g., schizophrenia, depression, anxiety, bipolar, ADHD, interventions / treatment)	2274	3.56	0.01	0.66	7	99.69
108	Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with prohibited drug use who shows evidence he or she is now free from such use	1791	3.56	0.02	0.73	464	79.42
136	Apply nondiscretionary certification standards to disqualify a driver when hearing measurements with or without a hearing aid fall below minimum standards	2163	3.56	0.02	0.71	90	96.01
103	Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption	2064	3.56	0.02	0.75	208	90.85
14	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the ears (e.g., hearing loss, hearing aids, vertigo, Meniere's, tinnitus, implants)	2277	3.56	0.01	0.62	3	99.87

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
83	Obtain additional information when indicated by cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2132	3.56	0.02	0.72	141	93.80
80	Examine the driver's mental status and note cognitive impairment (e.g., orientation, intellect, memory, obsessions, circumstantial / tangential speech)	2247	3.56	0.01	0.68	32	98.60
69	Examine the driver's extremities and note handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	2233	3.56	0.01	0.68	50	97.81
109	Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider	2235	3.57	0.01	0.68	45	98.03
104	Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's / optometrist's report as required	2001	3.58	0.02	0.72	267	88.23
67	Examine the driver's extremities and note deformities, atrophy, weakness, paralysis, surgical scars,	2234	3.58	0.01	0.64	5	99.78
35	Examine the driver's eyes and note horizontal field of vision in each eye	2233	3.58	0.01	0.63	20	99.11
66	Examine the driver's extremities and note loss, impairment, or use of orthosis	2240	3.59	0.01	0.65	5	99.78
44	Examine the driver's ears and note presence or absence of a hearing aid and whether required to meet the standard	2231	3.59	0.01	0.66	7	99.69
91	Refer a driver with limitations in extremity movement for an on-road performance evaluation and / or skill performance evaluation	2011	3.60	0.01	0.65	268	88.24
49	Examine the driver's heart: thrills, murmurs, extra sounds, and enlargement	2248	3.60	0.01	0.63	6	99.73
116	Advise a driver with a diabetes exemption, he / she should possess a rapidly absorbable form of glucose while driving	1940	3.63	0.01	0.65	322	85.76
118	Advise a driver with a diabetes exemption, he / she should comply with each condition of his / her exemption	1934	3.64	0.01	0.64	318	85.88
30	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other conditions that could impair a driver's ability to safely function	2260	3.65	0.01	0.59	14	99.38
37	Examine the driver's eyes and note presence or absence of monocular vision	2222	3.66	0.01	0.63	29	98.71
11	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include his or her use of recreational / addictive substances (e.g., nicotine, alcohol, inhalants)	2267	3.67	0.01	0.60	11	99.52
9	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include limitations placed during prior FMCSA exams	2228	3.67	0.01	0.62	45	98.02
6	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any recent changes in health status	2277	3.68	0.01	0.52	4	99.82
72	Examine the driver's neurologic status and note impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)	2262	3.69	0.01	0.58	16	99.30

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
137	Disqualify a driver who is currently taking methadone	2021	3.71	0.01	0.64	251	88.95
20	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include sleep disorders (e.g., sleep apnea, narcolepsy, insomnia, daytime sleepiness, loud snoring, testing and / or treatments)	2275	3.72	0.01	0.55	6	99.74
134	Apply nondiscretionary certification standards to disqualify a driver with diabetes requiring insulin control (unless accompanied by an exemption)	2142	3.72	0.01	0.61	109	95.16
3	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include specifics regarding any affirmative responses in the history	2287	3.72	0.01	0.49	0	100.00
7	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include whether he / she has any medical conditions or current complaints	2279	3.73	0.01	0.50	2	99.91
1	Verify the identity of the driver	2237	3.73	0.01	0.56	52	97.73
120	Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include…	2238	3.73	0.01	0.55	33	98.55
135	Apply nondiscretionary certification standards to disqualify a driver when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption	2197	3.74	0.01	0.54	76	96.66
10	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying	2281	3.75	0.01	0.52	5	99.78
13	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, macular degeneration, monocular vision)	2281	3.76	0.01	0.49	4	99.82
8	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any incidents of disability / physical limitations	2273	3.76	0.01	0.50	4	99.82
133	Apply nondiscretionary certification standards to disqualify a driver with a history of epilepsy	2136	3.77	0.01	0.55	134	94.10
143	Certify a driver for an appropriate interval	2252	3.78	0.01	0.47	18	99.21
34	Examine the driver's eyes and note whether corrective lenses are required to meet the standard	2249	3.78	0.01	0.49	12	99.47
23	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include diabetes mellitus	2266	3.80	0.01	0.45	2	99.91
50	Examine the driver's heart: blood pressure and pulse (rate and rhythm)	2243	3.81	0.01	0.43	3	99.87
138	Disqualify a driver who has a current clinical diagnosis of alcoholism	2064	3.81	0.01	0.50	209	90.81
16	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiovascular diseases (e.g., hypertension, congestive heart failure, myocardial infarction, coronary insufficiency, or thrombosis)	2282	3.82	0.01	0.43	2	99.91

Task No.	Task Statement	N	Mean	SE Mean	SD	# Zeros	% Performed
145	Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition	2261	3.82	0.01	0.43	17	99.25
27	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include substance use and abuse (e.g., alcohol, narcotics, illicit or legal drugs)	2264	3.83	0.01	0.46	6	99.74
144	Indicate certification status, which may require…	2245	3.83	0.01	0.45	18	99.20
90	Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider: vision, cardiac, pulmonary, endocrine, musculoskeletal, neurologic, sleep, mental/emotional health	2271	3.83	0.01	0.43	10	99.56
33	Examine the driver's eyes and note distant acuity in each and both eyes (Snellen comparable values)	2251	3.84	0.01	0.40	12	99.47
142	Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified	2252	3.84	0.01	0.43	29	98.73
146	Complete a medical examination report and medical certificate / card…	2260	3.84	0.01	0.42	7	99.69
15	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiac symptoms (e.g., syncope, dyspnea, chest pain, palpitations)	2275	3.87	0.01	0.36	3	99.87
141	Document the reason(s) for the disqualification and / or referral	2214	3.87	0.01	0.36	35	98.44
140	Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists	2207	3.89	0.01	0.36	74	96.76
28	Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neurologic disorders (e.g., loss of consciousness, seizures, stroke / TIA, headaches / migraines, numbness / weakness)	2282	3.91	0.01	0.32	0	100.00
139	Disqualify a driver who uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician	2098	3.91	0.01	0.34	180	92.10

APPENDIX I

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Geographic Region Subgroups
(Data for Exclusion Rule 3)

Importance Ratings by Subgroups Based on Geographic Region Rule 3

*The C column shows the count of subgroups with mean importance values below 2.50

Region

	Eastern				Southern				Midwestern				Western				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	448	3.74	0.03	0.55	622	3.78	0.02	0.51	638	3.67	0.02	0.60	456	3.73	0.03	0.58	0
T2	451	3.46	0.04	0.81	618	3.42	0.03	0.84	646	3.40	0.03	0.83	455	3.41	0.04	0.86	0
T3	463	3.77	0.02	0.46	626	3.70	0.02	0.49	660	3.72	0.02	0.50	463	3.71	0.02	0.50	0
T4	462	3.60	0.03	0.58	626	3.55	0.02	0.61	659	3.54	0.02	0.63	460	3.52	0.03	0.63	0
T5	463	3.42	0.03	0.68	624	3.26	0.03	0.74	657	3.29	0.03	0.78	463	3.26	0.04	0.76	0
T6	461	3.74	0.02	0.47	623	3.67	0.02	0.51	657	3.66	0.02	0.52	462	3.68	0.03	0.56	0
T7	462	3.75	0.02	0.49	624	3.73	0.02	0.50	659	3.73	0.02	0.48	459	3.71	0.02	0.53	0
T8	460	3.80	0.02	0.45	623	3.77	0.02	0.52	659	3.74	0.02	0.52	457	3.74	0.02	0.51	0
T9	455	3.70	0.03	0.58	611	3.69	0.02	0.61	644	3.64	0.03	0.65	446	3.69	0.03	0.61	0
T10	463	3.83	0.02	0.44	624	3.77	0.02	0.50	659	3.74	0.02	0.52	461	3.67	0.03	0.59	0
T11	458	3.74	0.03	0.54	619	3.70	0.02	0.59	658	3.62	0.02	0.63	460	3.62	0.03	0.65	0
T12	457	2.98	0.04	0.82	617	2.98	0.03	0.80	651	2.94	0.03	0.83	453	2.94	0.04	0.84	0
T13	462	3.81	0.02	0.44	625	3.77	0.02	0.47	659	3.74	0.02	0.51	462	3.72	0.02	0.52	0
T14	462	3.60	0.03	0.60	623	3.58	0.02	0.60	660	3.55	0.02	0.61	461	3.49	0.03	0.68	0
T15	462	3.91	0.02	0.33	623	3.87	0.01	0.37	659	3.87	0.01	0.36	461	3.84	0.02	0.39	0
T16	463	3.85	0.02	0.42	625	3.82	0.02	0.43	659	3.83	0.02	0.42	462	3.79	0.02	0.45	0
T17	461	3.27	0.04	0.79	621	3.25	0.03	0.75	652	3.23	0.03	0.75	457	3.22	0.03	0.74	0
T18	459	3.47	0.03	0.68	615	3.36	0.03	0.69	653	3.36	0.03	0.69	460	3.36	0.03	0.72	0
T19	461	3.45	0.03	0.70	622	3.36	0.03	0.71	660	3.36	0.03	0.71	462	3.30	0.03	0.75	0
T20	462	3.78	0.02	0.51	621	3.70	0.02	0.57	657	3.76	0.02	0.50	462	3.65	0.03	0.61	0
T21	461	2.90	0.04	0.86	618	2.84	0.03	0.84	654	2.82	0.03	0.83	459	2.85	0.04	0.88	0
T22	460	2.92	0.04	0.93	615	2.85	0.04	0.90	651	2.86	0.03	0.86	456	2.88	0.04	0.94	0
T23	460	3.86	0.02	0.41	620	3.78	0.02	0.46	657	3.82	0.02	0.44	457	3.75	0.02	0.50	0
T24	461	2.92	0.04	0.84	617	2.83	0.03	0.86	653	2.81	0.03	0.82	452	2.85	0.04	0.87	0
T25	459	3.48	0.03	0.70	624	3.37	0.03	0.73	661	3.37	0.03	0.74	460	3.32	0.03	0.75	0
T26	456	3.26	0.04	0.82	615	3.19	0.03	0.84	652	3.13	0.03	0.81	457	3.19	0.04	0.84	0
T27	460	3.87	0.02	0.40	618	3.83	0.02	0.45	657	3.81	0.02	0.48	460	3.79	0.02	0.50	0
T28	463	3.93	0.01	0.27	626	3.92	0.01	0.31	660	3.90	0.01	0.31	460	3.87	0.02	0.37	0
T29	463	3.60	0.03	0.63	620	3.57	0.03	0.65	660	3.52	0.03	0.67	459	3.55	0.03	0.67	0
T30	460	3.69	0.03	0.58	616	3.65	0.02	0.60	653	3.62	0.02	0.60	457	3.63	0.03	0.59	0
T31	448	2.73	0.05	1.01	606	2.62	0.04	1.03	644	2.70	0.04	1.00	451	2.67	0.05	1.01	0
T32	457	2.97	0.04	0.87	621	2.84	0.04	0.88	654	2.89	0.03	0.85	457	2.86	0.04	0.87	0

Importance Ratings by Subgroups Based on Geographic Region Rule 3

*The C column shows the count of subgroups with mean importance values below 2.50

Region

	Eastern				Southern				Midwestern				Western				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T33	454	3.86	0.02	0.35	614	3.83	0.02	0.41	653	3.86	0.01	0.36	459	3.79	0.02	0.46	0
T34	455	3.83	0.02	0.44	612	3.78	0.02	0.47	653	3.79	0.02	0.46	457	3.72	0.03	0.58	0
T35	449	3.64	0.03	0.57	607	3.57	0.03	0.67	652	3.59	0.02	0.61	456	3.54	0.03	0.66	0
T36	449	3.57	0.03	0.65	605	3.51	0.03	0.70	646	3.45	0.03	0.70	455	3.47	0.04	0.75	0
T37	449	3.73	0.03	0.56	603	3.65	0.03	0.63	647	3.65	0.03	0.66	453	3.61	0.03	0.66	0
T38	454	3.33	0.04	0.80	617	3.32	0.03	0.81	652	3.25	0.03	0.80	457	3.29	0.04	0.82	0
T39	450	3.21	0.04	0.83	611	3.14	0.04	0.87	648	3.09	0.03	0.86	454	3.11	0.04	0.86	0
T40	453	3.36	0.04	0.76	607	3.27	0.03	0.84	646	3.24	0.03	0.81	455	3.27	0.04	0.82	0
T41	407	2.96	0.05	0.93	562	2.76	0.04	0.96	587	2.78	0.04	0.94	420	2.86	0.05	0.99	0
T42	458	3.01	0.04	0.92	615	2.95	0.04	0.91	652	2.92	0.03	0.89	458	2.90	0.04	0.94	0
T43	449	3.62	0.03	0.63	616	3.51	0.03	0.71	650	3.56	0.03	0.67	453	3.49	0.04	0.75	0
T44	448	3.67	0.03	0.58	610	3.58	0.03	0.69	650	3.60	0.02	0.63	452	3.54	0.03	0.70	0
T45	458	3.13	0.04	0.89	619	3.04	0.04	0.90	654	3.06	0.03	0.87	450	3.02	0.04	0.90	0
T46	456	3.36	0.04	0.77	611	3.29	0.03	0.80	647	3.29	0.03	0.78	455	3.21	0.04	0.81	0
T47	446	2.86	0.04	0.94	604	2.79	0.04	0.91	647	2.72	0.04	0.94	442	2.76	0.04	0.91	0
T48	456	3.50	0.03	0.73	608	3.43	0.03	0.75	645	3.48	0.03	0.77	454	3.34	0.04	0.83	0
T49	456	3.67	0.03	0.61	611	3.57	0.03	0.63	654	3.62	0.02	0.59	456	3.55	0.03	0.68	0
T50	453	3.86	0.02	0.36	618	3.80	0.02	0.45	650	3.82	0.02	0.43	455	3.76	0.02	0.49	0
T51	450	3.64	0.03	0.58	606	3.51	0.03	0.70	646	3.53	0.03	0.67	455	3.49	0.03	0.70	0
T52	450	3.38	0.04	0.76	615	3.30	0.03	0.77	652	3.29	0.03	0.78	458	3.19	0.04	0.86	0
T53	453	3.51	0.03	0.69	617	3.40	0.03	0.73	655	3.43	0.03	0.71	454	3.38	0.04	0.78	0
T54	447	3.10	0.04	0.88	599	2.99	0.04	0.91	642	2.99	0.04	0.91	450	2.92	0.04	0.94	0
T55	443	2.90	0.04	0.94	597	2.76	0.04	0.99	641	2.83	0.04	0.97	445	2.67	0.05	0.99	0
T56	453	2.81	0.05	1.00	608	2.63	0.04	0.97	644	2.73	0.04	0.96	449	2.61	0.05	1.00	0
T57	452	3.25	0.04	0.81	612	3.11	0.03	0.86	650	3.22	0.03	0.83	445	3.15	0.04	0.83	0
T58	454	3.48	0.03	0.71	613	3.39	0.03	0.76	649	3.45	0.03	0.72	447	3.40	0.04	0.78	0
T59	448	3.23	0.04	0.81	606	3.07	0.04	0.88	649	3.18	0.03	0.82	451	3.05	0.04	0.91	0
T60	445	3.02	0.04	0.93	602	2.93	0.04	0.95	649	2.95	0.04	0.93	445	2.91	0.04	0.93	0
T61	454	3.19	0.04	0.91	607	3.05	0.04	0.89	650	3.09	0.03	0.88	453	2.96	0.04	0.89	0
T62	456	3.11	0.04	0.88	611	2.98	0.03	0.86	644	3.00	0.03	0.87	451	2.92	0.04	0.91	0
T63	456	3.43	0.04	0.76	612	3.37	0.03	0.78	645	3.33	0.03	0.77	452	3.30	0.04	0.81	0
T64	453	3.00	0.04	0.86	610	2.94	0.04	0.91	645	2.87	0.04	0.92	447	2.81	0.04	0.90	0
T65	458	3.44	0.03	0.74	614	3.36	0.03	0.79	653	3.37	0.03	0.72	455	3.26	0.04	0.82	0
T66	455	3.64	0.03	0.63	608	3.58	0.03	0.66	652	3.63	0.02	0.60	453	3.50	0.03	0.74	0

Importance Ratings by Subgroups Based on Geographic Region Rule 3

*The C column shows the count of subgroups with mean importance values below 2.50

	Region																
	Eastern				Southern				Midwestern				Western				
Task	N	Mean	SEM	SD	N	Mean	SEM	SD	N	Mean	SEM	SD	N	Mean	SEM	SD	C*
T67	450	3.63	0.03	0.61	609	3.58	0.03	0.62	650	3.59	0.03	0.64	454	3.52	0.03	0.70	0
T68	454	3.47	0.03	0.70	604	3.43	0.03	0.74	646	3.42	0.03	0.70	448	3.26	0.04	0.81	0
T69	456	3.63	0.03	0.61	609	3.59	0.03	0.67	648	3.58	0.03	0.67	449	3.45	0.04	0.75	0
T70	460	3.03	0.04	0.88	616	2.95	0.04	0.87	653	2.92	0.04	0.91	459	2.93	0.04	0.88	0
T71	453	3.24	0.04	0.83	609	3.13	0.04	0.89	642	3.12	0.03	0.87	447	3.02	0.04	0.94	0
T72	459	3.74	0.02	0.52	619	3.65	0.03	0.64	654	3.72	0.02	0.53	458	3.65	0.03	0.62	0
T73	460	3.44	0.03	0.73	619	3.28	0.03	0.80	652	3.31	0.03	0.76	456	3.25	0.04	0.82	0
T74	454	3.46	0.04	0.75	603	3.38	0.03	0.76	640	3.33	0.03	0.77	452	3.37	0.04	0.77	0
T75	460	3.36	0.04	0.76	618	3.22	0.03	0.79	657	3.20	0.03	0.81	459	3.19	0.04	0.81	0
T76	454	3.27	0.04	0.83	608	3.19	0.03	0.80	648	3.17	0.03	0.85	455	3.17	0.04	0.86	0
T77	460	3.32	0.04	0.83	612	3.19	0.03	0.85	651	3.20	0.03	0.88	456	3.17	0.04	0.90	0
T78	452	3.56	0.03	0.73	617	3.55	0.03	0.71	644	3.50	0.03	0.77	454	3.46	0.04	0.78	0
T79	463	3.62	0.03	0.60	624	3.52	0.03	0.70	652	3.53	0.03	0.67	458	3.50	0.03	0.74	0
T80	458	3.63	0.03	0.64	613	3.54	0.03	0.70	652	3.55	0.03	0.67	450	3.55	0.03	0.70	0
T81	457	3.54	0.03	0.69	613	3.46	0.03	0.75	650	3.48	0.03	0.73	458	3.48	0.03	0.73	0
T82	441	3.47	0.03	0.72	585	3.35	0.03	0.78	620	3.33	0.03	0.81	423	3.29	0.04	0.88	0
T83	447	3.64	0.03	0.66	572	3.56	0.03	0.70	623	3.59	0.03	0.69	428	3.46	0.04	0.80	0
T84	431	3.11	0.05	0.94	543	3.04	0.04	0.91	568	2.94	0.04	0.96	410	3.04	0.05	0.91	0
T85	407	2.80	0.05	0.99	524	2.67	0.04	0.97	544	2.65	0.04	0.98	392	2.80	0.05	1.01	0
T86	405	2.88	0.05	1.00	526	2.82	0.04	0.92	551	2.80	0.04	0.96	400	2.84	0.05	1.01	0
T87	406	3.40	0.04	0.82	532	3.17	0.04	0.93	580	3.38	0.03	0.83	392	3.15	0.05	0.95	0
T88	376	3.03	0.05	0.96	492	2.91	0.04	0.96	499	2.81	0.04	0.99	375	2.97	0.05	0.99	0
T89	333	2.78	0.05	0.99	446	2.64	0.05	0.95	459	2.60	0.05	1.00	323	2.79	0.06	1.02	0
T90	460	3.89	0.02	0.36	621	3.82	0.02	0.44	659	3.83	0.02	0.42	459	3.79	0.02	0.48	0
T91	402	3.68	0.03	0.59	542	3.57	0.03	0.64	585	3.57	0.03	0.67	414	3.57	0.03	0.66	0
T92	436	3.18	0.04	0.85	589	2.98	0.04	0.91	633	3.05	0.04	0.89	442	3.08	0.04	0.89	0
T93	445	3.48	0.03	0.73	588	3.39	0.03	0.77	621	3.40	0.03	0.77	435	3.31	0.04	0.83	0
T94	445	3.60	0.03	0.67	586	3.49	0.03	0.73	624	3.52	0.03	0.74	426	3.42	0.04	0.78	0
T95	426	2.99	0.05	0.97	539	2.96	0.04	0.94	581	2.78	0.04	0.97	410	2.88	0.05	0.96	0
T96	405	2.70	0.05	1.02	522	2.65	0.05	1.04	558	2.56	0.04	1.01	399	2.67	0.05	1.02	0
T97	420	2.90	0.05	0.97	536	2.82	0.04	0.99	588	2.76	0.04	0.96	406	2.81	0.05	0.99	0
T98	421	3.37	0.04	0.85	536	3.25	0.04	0.94	598	3.35	0.03	0.84	400	3.09	0.05	0.95	0
T99	381	2.95	0.05	0.95	492	2.93	0.04	0.98	538	2.76	0.04	1.00	378	2.94	0.05	0.99	0
T100	371	2.80	0.05	1.02	479	2.73	0.05	1.02	505	2.61	0.04	1.01	352	2.70	0.05	1.03	0

Importance Ratings by Subgroups Based on Geographic Region Rule 3

*The C column shows the count of subgroups with mean importance values below 2.50

Region

	Eastern				Southern				Midwestern				Western				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T101	436	3.45	0.04	0.80	574	3.44	0.03	0.82	622	3.34	0.03	0.81	415	3.22	0.05	0.92	0
T102	436	3.54	0.03	0.69	586	3.41	0.03	0.78	632	3.43	0.03	0.77	423	3.36	0.04	0.77	0
T103	421	3.65	0.03	0.65	570	3.54	0.03	0.77	593	3.59	0.03	0.71	416	3.45	0.04	0.84	0
T104	411	3.68	0.03	0.64	541	3.52	0.03	0.78	580	3.62	0.03	0.64	407	3.48	0.04	0.79	0
T105	345	3.32	0.05	0.86	470	3.18	0.04	0.94	515	3.31	0.04	0.88	366	3.15	0.05	0.95	0
T106	309	3.21	0.05	0.92	402	3.10	0.05	0.98	447	3.22	0.04	0.92	309	3.06	0.06	0.98	0
T107	382	3.64	0.04	0.70	480	3.53	0.04	0.77	526	3.51	0.03	0.76	357	3.50	0.04	0.78	0
T108	379	3.62	0.04	0.69	475	3.55	0.03	0.74	528	3.53	0.03	0.76	354	3.52	0.04	0.75	0
T109	450	3.62	0.03	0.65	620	3.56	0.03	0.70	644	3.57	0.03	0.66	449	3.53	0.03	0.70	0
T110	454	3.60	0.03	0.67	614	3.56	0.03	0.71	649	3.45	0.03	0.74	449	3.51	0.03	0.74	0
T111	445	3.47	0.04	0.77	602	3.41	0.03	0.78	639	3.33	0.03	0.79	447	3.40	0.04	0.81	0
T112	402	3.19	0.05	0.91	551	3.15	0.04	0.90	576	3.06	0.04	0.94	412	3.10	0.04	0.91	0
T113	396	3.15	0.05	0.91	532	3.08	0.04	0.91	549	3.01	0.04	0.95	395	3.02	0.05	0.94	0
T114	422	3.36	0.04	0.80	564	3.34	0.03	0.78	603	3.23	0.03	0.83	420	3.30	0.04	0.87	0
T115	431	3.57	0.03	0.71	583	3.48	0.03	0.72	616	3.48	0.03	0.76	430	3.52	0.03	0.70	0
T116	387	3.67	0.03	0.64	530	3.58	0.03	0.69	562	3.65	0.03	0.62	398	3.61	0.03	0.64	0
T117	363	3.47	0.04	0.80	507	3.36	0.04	0.84	536	3.49	0.03	0.73	385	3.40	0.04	0.80	0
T118	387	3.69	0.03	0.59	535	3.62	0.03	0.65	561	3.62	0.03	0.67	392	3.63	0.03	0.65	0
T119	353	3.43	0.04	0.83	478	3.29	0.04	0.92	517	3.38	0.04	0.86	365	3.33	0.05	0.90	0
T120	453	3.74	0.03	0.53	616	3.72	0.02	0.58	649	3.76	0.02	0.50	451	3.68	0.03	0.60	0
T121	405	3.33	0.04	0.81	558	3.31	0.04	0.84	595	3.34	0.03	0.83	421	3.28	0.04	0.86	0
T122	323	3.40	0.04	0.80	445	3.41	0.04	0.77	489	3.39	0.04	0.83	343	3.29	0.05	0.88	0
T123	317	3.54	0.04	0.73	437	3.50	0.04	0.74	483	3.53	0.03	0.73	324	3.46	0.04	0.80	0
T124	379	3.24	0.05	0.91	521	3.23	0.04	0.91	542	3.27	0.04	0.87	384	3.23	0.05	0.91	0
T125	415	3.14	0.04	0.86	552	3.00	0.04	0.93	597	2.98	0.04	0.90	417	2.93	0.05	0.98	0
T126	415	3.18	0.04	0.86	554	3.05	0.04	0.93	594	3.09	0.04	0.87	421	2.99	0.05	0.96	0
T127	406	2.82	0.05	0.99	532	2.74	0.04	0.98	583	2.75	0.04	0.94	410	2.67	0.05	0.99	0
T128	388	2.70	0.05	0.99	512	2.60	0.04	0.99	569	2.61	0.04	0.97	393	2.55	0.05	1.01	0
T129	395	2.85	0.05	0.95	523	2.76	0.04	0.98	575	2.79	0.04	0.95	408	2.67	0.05	1.04	0
T130	425	3.36	0.04	0.78	544	3.30	0.04	0.84	593	3.34	0.03	0.78	402	3.19	0.05	0.91	0
T131	437	3.52	0.04	0.74	572	3.48	0.03	0.75	613	3.52	0.03	0.71	424	3.39	0.04	0.84	0
T132	400	3.24	0.04	0.83	489	3.17	0.04	0.90	540	3.23	0.04	0.84	372	3.10	0.05	0.90	0
T133	442	3.79	0.03	0.55	579	3.77	0.02	0.55	616	3.81	0.02	0.47	430	3.68	0.03	0.64	0
T134	440	3.77	0.03	0.55	582	3.74	0.02	0.58	620	3.77	0.02	0.57	432	3.58	0.04	0.74	0

Importance Ratings by Subgroups Based on Geographic Region Rule 3

*The C column shows the count of subgroups with mean importance values below 2.50

Region

	Eastern				Southern				Midwestern				Western				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T135	446	3.80	0.02	0.49	602	3.75	0.02	0.55	636	3.78	0.02	0.49	442	3.63	0.03	0.63	0
T136	441	3.63	0.03	0.65	597	3.59	0.03	0.69	619	3.56	0.03	0.70	437	3.42	0.04	0.79	0
T137	418	3.73	0.03	0.62	555	3.73	0.03	0.63	579	3.71	0.03	0.63	405	3.65	0.04	0.72	0
T138	424	3.84	0.02	0.45	567	3.82	0.02	0.49	590	3.81	0.02	0.49	415	3.76	0.03	0.57	0
T139	435	3.92	0.02	0.32	577	3.94	0.01	0.26	601	3.90	0.02	0.37	418	3.88	0.02	0.41	0
T140	450	3.92	0.01	0.29	605	3.91	0.01	0.31	635	3.87	0.02	0.39	447	3.87	0.02	0.40	0
T141	452	3.89	0.02	0.33	612	3.87	0.01	0.36	638	3.88	0.01	0.36	443	3.86	0.02	0.40	0
T142	458	3.85	0.02	0.45	619	3.82	0.02	0.43	650	3.86	0.02	0.39	456	3.82	0.02	0.46	0
T143	37	3.49	0.11	0.65	41	2.80	0.16	1.03	55	2.71	0.15	1.15	34	2.50	0.18	1.02	0
T144	59	3.08	0.13	0.99	71	2.87	0.10	0.88	111	3.25	0.09	0.95	69	3.13	0.11	0.94	0
T145	21	3.57	0.19	0.87	48	3.19	0.14	1.00	60	3.65	0.10	0.80	40	3.43	0.16	0.98	0
T146	68	3.59	0.09	0.78	85	3.48	0.08	0.77	101	3.46	0.09	0.90	68	3.46	0.11	0.87	0

Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Eastern	466	20.3	21.0	21.0
	Southern	630	27.4	28.4	49.3
	Midwestern	661	28.8	29.7	79.1
	Western	465	20.2	20.9	100.0
	Total	2222	96.7	100.0	
Missing	System	75	3.3		
Total		2297	100.0		

APPENDIX J

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Profession Subgroups
(Data for Exclusion Rule 4)

Importance Ratings by Subgroups Based on Profession Rule 4

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following is your profession?

	APN				DC				DO				MD				PA				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	424	3.75	0.03	0.55	336	3.81	0.03	0.51	184	3.78	0.04	0.51	571	3.72	0.02	0.59	673	3.67	0.02	0.59	0
T2	433	3.46	0.04	0.80	334	3.56	0.04	0.79	182	3.48	0.06	0.79	573	3.37	0.04	0.85	673	3.35	0.03	0.86	0
T3	442	3.77	0.02	0.46	337	3.62	0.03	0.56	185	3.73	0.04	0.48	585	3.77	0.02	0.45	689	3.70	0.02	0.50	0
T4	442	3.63	0.03	0.54	334	3.49	0.03	0.63	185	3.59	0.05	0.62	584	3.56	0.03	0.62	687	3.51	0.02	0.65	0
T5	439	3.36	0.03	0.72	337	3.32	0.04	0.76	185	3.37	0.05	0.71	584	3.31	0.03	0.77	687	3.24	0.03	0.75	0
T6	441	3.71	0.02	0.47	336	3.66	0.03	0.54	183	3.70	0.04	0.51	580	3.71	0.02	0.51	688	3.65	0.02	0.54	0
T7	441	3.74	0.02	0.47	337	3.76	0.02	0.45	183	3.70	0.04	0.56	582	3.74	0.02	0.52	687	3.71	0.02	0.52	0
T8	438	3.81	0.02	0.42	336	3.82	0.03	0.47	185	3.69	0.04	0.57	582	3.71	0.02	0.56	683	3.75	0.02	0.50	0
T9	429	3.73	0.03	0.54	329	3.68	0.03	0.62	181	3.67	0.04	0.57	575	3.66	0.03	0.67	665	3.65	0.02	0.63	0
T10	441	3.81	0.02	0.45	338	3.72	0.03	0.52	182	3.75	0.04	0.50	584	3.77	0.02	0.50	687	3.72	0.02	0.56	0
T11	438	3.75	0.02	0.52	336	3.64	0.04	0.65	183	3.59	0.05	0.66	582	3.62	0.03	0.65	679	3.70	0.02	0.58	0
T12	438	3.03	0.04	0.78	335	3.20	0.04	0.80	176	2.95	0.06	0.84	575	2.81	0.04	0.87	677	2.92	0.03	0.79	0
T13	441	3.78	0.02	0.46	336	3.77	0.03	0.49	184	3.76	0.04	0.51	581	3.74	0.02	0.50	690	3.74	0.02	0.49	0
T14	439	3.64	0.03	0.55	336	3.57	0.03	0.64	185	3.58	0.05	0.62	581	3.49	0.03	0.65	687	3.54	0.02	0.64	0
T15	439	3.88	0.02	0.33	337	3.79	0.02	0.46	185	3.84	0.03	0.39	582	3.90	0.01	0.32	684	3.89	0.01	0.35	0
T16	440	3.83	0.02	0.44	337	3.74	0.03	0.49	185	3.78	0.03	0.45	585	3.88	0.01	0.35	686	3.81	0.02	0.45	0
T17	438	3.34	0.03	0.71	332	3.33	0.04	0.76	185	3.30	0.05	0.75	575	3.15	0.03	0.79	682	3.19	0.03	0.74	0
T18	434	3.50	0.03	0.62	336	3.31	0.04	0.76	185	3.36	0.05	0.69	578	3.36	0.03	0.72	675	3.38	0.03	0.69	0
T19	441	3.50	0.03	0.65	335	3.34	0.04	0.77	184	3.36	0.06	0.76	583	3.32	0.03	0.74	686	3.34	0.03	0.70	0
T20	441	3.77	0.02	0.48	336	3.53	0.04	0.73	185	3.76	0.04	0.51	579	3.78	0.02	0.48	685	3.72	0.02	0.54	0
T21	442	3.02	0.04	0.75	335	2.94	0.05	0.91	183	2.96	0.06	0.83	578	2.70	0.04	0.88	680	2.80	0.03	0.83	0
T22	436	3.04	0.04	0.80	331	3.02	0.05	0.94	180	3.00	0.07	0.92	575	2.72	0.04	0.94	682	2.79	0.03	0.89	0
T23	437	3.85	0.02	0.39	330	3.66	0.03	0.59	185	3.81	0.03	0.42	578	3.86	0.02	0.39	687	3.79	0.02	0.45	0
T24	438	3.03	0.04	0.77	327	2.96	0.05	0.87	183	2.93	0.06	0.85	577	2.69	0.04	0.87	682	2.81	0.03	0.83	0
T25	440	3.49	0.03	0.66	337	3.32	0.04	0.77	183	3.38	0.06	0.75	583	3.38	0.03	0.73	684	3.34	0.03	0.74	0
T26	434	3.30	0.04	0.76	330	3.26	0.05	0.85	183	3.23	0.06	0.84	580	3.14	0.04	0.86	674	3.11	0.03	0.83	0
T27	440	3.88	0.02	0.37	337	3.76	0.03	0.57	181	3.81	0.04	0.50	578	3.85	0.02	0.41	679	3.81	0.02	0.48	0
T28	443	3.93	0.01	0.28	336	3.87	0.02	0.38	184	3.89	0.03	0.35	582	3.92	0.01	0.29	688	3.90	0.01	0.33	0
T29	439	3.60	0.03	0.59	335	3.48	0.04	0.75	182	3.64	0.04	0.59	581	3.61	0.02	0.60	688	3.49	0.03	0.70	0
T30	434	3.75	0.02	0.51	332	3.62	0.03	0.59	184	3.64	0.05	0.61	583	3.64	0.02	0.60	678	3.60	0.02	0.63	0
T31	430	2.67	0.05	0.98	330	2.61	0.06	1.00	180	2.74	0.07	1.00	566	2.75	0.04	1.00	668	2.64	0.04	1.05	0
T32	435	3.01	0.04	0.82	335	2.83	0.05	0.91	185	2.87	0.07	0.92	578	2.85	0.04	0.88	681	2.87	0.03	0.85	0
T33	436	3.85	0.02	0.40	333	3.70	0.03	0.53	180	3.87	0.02	0.33	576	3.90	0.01	0.33	680	3.84	0.01	0.38	0
T34	435	3.78	0.02	0.49	332	3.70	0.03	0.55	182	3.79	0.04	0.49	577	3.82	0.02	0.46	677	3.78	0.02	0.48	0

Importance Ratings by Subgroups Based on Profession Rule 4

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following is your profession?

	APN				DC				DO				MD				PA				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T35	435	3.70	0.03	0.53	328	3.57	0.04	0.66	177	3.53	0.05	0.70	574	3.53	0.03	0.68	673	3.56	0.02	0.62	0
T36	433	3.62	0.03	0.61	320	3.35	0.05	0.85	176	3.54	0.05	0.65	574	3.45	0.03	0.72	674	3.52	0.03	0.66	0
T37	431	3.70	0.03	0.58	321	3.57	0.04	0.66	177	3.63	0.05	0.64	576	3.71	0.03	0.60	673	3.63	0.02	0.65	0
T38	436	3.52	0.03	0.66	332	3.37	0.04	0.78	179	3.21	0.06	0.85	577	3.06	0.04	0.91	677	3.34	0.03	0.75	0
T39	429	3.30	0.04	0.74	328	3.26	0.05	0.85	177	3.12	0.07	0.87	575	2.98	0.04	0.92	675	3.13	0.03	0.82	0
T40	433	3.43	0.03	0.69	328	3.23	0.05	0.85	177	3.29	0.06	0.81	566	3.16	0.04	0.86	679	3.30	0.03	0.80	0
T41	403	2.95	0.04	0.89	305	3.01	0.05	0.95	164	2.89	0.08	0.97	516	2.63	0.04	1.02	610	2.82	0.04	0.93	0
T42	439	3.12	0.04	0.82	329	2.96	0.05	0.93	181	3.01	0.07	0.89	576	2.74	0.04	0.97	682	2.97	0.03	0.89	0
T43	435	3.64	0.03	0.60	332	3.33	0.05	0.87	178	3.56	0.05	0.65	571	3.58	0.03	0.68	674	3.54	0.03	0.66	0
T44	431	3.65	0.03	0.59	329	3.43	0.04	0.81	181	3.60	0.05	0.66	568	3.65	0.03	0.61	676	3.60	0.02	0.63	0
T45	437	3.30	0.04	0.75	331	2.89	0.05	0.96	183	3.03	0.07	0.90	578	2.95	0.04	0.93	677	3.08	0.03	0.86	0
T46	434	3.56	0.03	0.65	334	3.20	0.04	0.82	181	3.18	0.06	0.86	572	3.20	0.03	0.81	672	3.28	0.03	0.77	0
T47	428	3.01	0.04	0.83	323	2.84	0.05	0.94	182	2.76	0.07	0.96	557	2.54	0.04	0.97	671	2.80	0.03	0.89	0
T48	436	3.54	0.03	0.70	329	3.20	0.05	0.91	182	3.41	0.06	0.83	572	3.50	0.03	0.75	667	3.45	0.03	0.72	0
T49	437	3.77	0.02	0.47	332	3.37	0.04	0.79	182	3.53	0.05	0.70	570	3.56	0.03	0.63	680	3.65	0.02	0.57	0
T50	435	3.88	0.02	0.34	333	3.65	0.03	0.58	180	3.82	0.03	0.44	574	3.83	0.02	0.40	674	3.82	0.02	0.40	0
T51	431	3.68	0.03	0.58	328	3.35	0.04	0.77	182	3.54	0.05	0.64	568	3.46	0.03	0.69	669	3.60	0.02	0.62	0
T52	436	3.51	0.03	0.67	331	3.08	0.05	0.92	181	3.34	0.06	0.81	572	3.18	0.03	0.83	677	3.32	0.03	0.72	0
T53	438	3.60	0.03	0.61	331	3.18	0.05	0.85	182	3.46	0.05	0.70	576	3.35	0.03	0.75	675	3.48	0.03	0.66	0
T54	426	3.29	0.04	0.79	324	2.90	0.05	0.95	178	3.04	0.07	0.89	566	2.80	0.04	0.95	663	3.01	0.03	0.89	0
T55	428	2.93	0.04	0.90	318	2.63	0.06	1.02	177	2.86	0.07	0.99	564	2.81	0.04	1.00	661	2.74	0.04	0.97	0
T56	432	2.85	0.05	0.94	324	2.64	0.06	1.01	181	2.70	0.08	1.02	571	2.64	0.04	1.01	669	2.65	0.04	0.96	0
T57	438	3.38	0.04	0.75	321	3.14	0.05	0.90	180	3.08	0.07	0.91	574	3.05	0.04	0.88	669	3.20	0.03	0.80	0
T58	439	3.62	0.03	0.64	326	3.30	0.05	0.82	180	3.33	0.06	0.82	567	3.32	0.03	0.78	670	3.48	0.03	0.70	0
T59	434	3.35	0.04	0.75	328	3.03	0.05	0.95	180	3.13	0.07	0.89	565	2.97	0.04	0.88	668	3.18	0.03	0.82	0
T60	433	3.14	0.04	0.89	325	2.83	0.06	1.01	175	2.90	0.07	0.93	557	2.84	0.04	0.96	672	2.98	0.03	0.90	0
T61	433	3.16	0.04	0.86	331	2.95	0.05	0.98	179	3.07	0.07	0.95	572	3.09	0.04	0.88	673	3.06	0.03	0.88	0
T62	434	3.20	0.04	0.83	332	2.91	0.05	0.90	180	2.93	0.07	0.93	567	2.96	0.04	0.89	672	2.97	0.03	0.87	0
T63	434	3.54	0.03	0.67	331	3.20	0.05	0.84	178	3.22	0.07	0.88	569	3.28	0.03	0.82	673	3.39	0.03	0.75	0
T64	431	3.10	0.04	0.84	325	2.86	0.05	0.87	179	2.81	0.07	0.99	566	2.78	0.04	0.96	675	2.93	0.03	0.86	0
T65	436	3.53	0.03	0.65	332	3.13	0.05	0.86	183	3.38	0.06	0.77	576	3.36	0.03	0.77	678	3.34	0.03	0.77	0
T66	433	3.67	0.03	0.56	332	3.39	0.04	0.81	180	3.59	0.05	0.68	572	3.64	0.03	0.60	676	3.60	0.02	0.64	0
T67	433	3.67	0.03	0.57	333	3.43	0.04	0.75	181	3.52	0.05	0.73	566	3.61	0.03	0.60	674	3.58	0.02	0.63	0
T68	430	3.58	0.03	0.60	331	3.27	0.04	0.79	179	3.39	0.05	0.73	568	3.33	0.03	0.77	668	3.40	0.03	0.75	0

Importance Ratings by Subgroups Based on Profession Rule 4

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following is your profession?

	APN				DC				DO				MD				PA				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T69	437	3.72	0.03	0.54	325	3.44	0.04	0.74	183	3.51	0.05	0.69	572	3.52	0.03	0.73	669	3.57	0.03	0.67	0
T70	441	3.18	0.04	0.78	328	2.97	0.05	0.92	180	2.91	0.07	0.91	579	2.80	0.04	0.94	684	2.95	0.03	0.86	0
T71	435	3.38	0.04	0.76	328	2.99	0.05	0.95	175	2.95	0.07	0.90	570	3.03	0.04	0.91	668	3.16	0.03	0.88	0
T72	439	3.81	0.02	0.45	336	3.62	0.03	0.61	182	3.73	0.04	0.52	577	3.67	0.03	0.61	681	3.66	0.02	0.61	0
T73	439	3.46	0.03	0.68	331	3.08	0.05	0.87	183	3.35	0.06	0.77	577	3.34	0.03	0.77	681	3.30	0.03	0.80	0
T74	431	3.56	0.03	0.67	332	3.37	0.04	0.76	179	3.36	0.06	0.75	566	3.28	0.03	0.82	663	3.35	0.03	0.76	0
T75	438	3.44	0.03	0.73	335	3.25	0.04	0.81	180	3.23	0.06	0.81	578	3.16	0.03	0.81	686	3.18	0.03	0.80	0
T76	431	3.39	0.03	0.70	335	3.19	0.05	0.86	181	3.22	0.06	0.85	574	3.10	0.04	0.88	668	3.15	0.03	0.85	0
T77	435	3.45	0.03	0.72	333	3.32	0.05	0.84	181	3.24	0.06	0.82	573	2.94	0.04	0.97	682	3.24	0.03	0.82	0
T78	434	3.58	0.03	0.72	326	3.45	0.04	0.80	179	3.51	0.06	0.76	569	3.47	0.03	0.80	681	3.54	0.03	0.69	0
T79	439	3.73	0.02	0.49	333	3.38	0.04	0.80	182	3.55	0.05	0.65	582	3.54	0.03	0.66	685	3.49	0.03	0.71	0
T80	441	3.76	0.02	0.48	327	3.38	0.04	0.79	182	3.54	0.05	0.70	573	3.61	0.03	0.63	676	3.50	0.03	0.73	0
T81	436	3.66	0.03	0.55	327	3.30	0.05	0.84	180	3.52	0.06	0.75	578	3.50	0.03	0.70	682	3.45	0.03	0.75	0
T82	426	3.48	0.04	0.73	282	3.09	0.06	0.93	175	3.38	0.06	0.82	572	3.37	0.03	0.79	640	3.37	0.03	0.78	0
T83	415	3.66	0.03	0.64	289	3.26	0.05	0.91	172	3.47	0.06	0.74	563	3.62	0.03	0.67	648	3.60	0.03	0.67	0
T84	397	3.20	0.04	0.85	284	3.08	0.05	0.92	167	3.01	0.07	0.89	529	2.91	0.04	0.95	596	2.98	0.04	0.98	0
T85	380	2.92	0.05	0.90	274	2.81	0.06	1.01	160	2.71	0.08	0.98	495	2.49	0.05	1.02	580	2.73	0.04	0.99	1
T86	387	3.01	0.05	0.90	268	2.82	0.06	1.04	157	2.84	0.07	0.92	514	2.71	0.04	0.98	577	2.82	0.04	0.97	0
T87	385	3.40	0.04	0.81	249	2.89	0.06	1.00	164	3.30	0.07	0.91	541	3.45	0.03	0.78	590	3.19	0.04	0.93	0
T88	351	3.00	0.05	0.94	255	3.17	0.06	0.93	150	2.96	0.08	0.94	456	2.70	0.05	1.01	547	2.95	0.04	0.96	0
T89	324	2.86	0.05	0.92	232	2.83	0.06	0.99	121	2.74	0.09	1.00	419	2.49	0.05	1.03	479	2.67	0.04	0.98	1
T90	441	3.90	0.02	0.32	333	3.72	0.03	0.54	182	3.78	0.04	0.53	583	3.84	0.02	0.42	685	3.85	0.02	0.40	0
T91	371	3.74	0.03	0.53	305	3.38	0.04	0.76	170	3.57	0.05	0.64	531	3.63	0.03	0.63	589	3.58	0.03	0.65	0
T92	419	3.20	0.04	0.82	308	3.01	0.05	0.92	174	3.06	0.07	0.90	564	3.04	0.04	0.91	658	3.05	0.03	0.89	0
T93	422	3.51	0.03	0.69	293	3.08	0.05	0.92	174	3.42	0.06	0.83	578	3.45	0.03	0.74	645	3.42	0.03	0.74	0
T94	422	3.60	0.03	0.64	292	3.16	0.05	0.90	174	3.52	0.06	0.81	573	3.63	0.03	0.65	644	3.51	0.03	0.71	0
T95	395	3.10	0.04	0.88	285	2.95	0.05	0.90	160	2.94	0.08	0.99	532	2.78	0.04	1.00	602	2.84	0.04	0.98	0
T96	389	2.89	0.05	0.95	280	2.80	0.06	0.98	151	2.65	0.08	1.03	500	2.44	0.05	1.03	583	2.58	0.04	1.03	1
T97	394	3.02	0.04	0.89	280	2.81	0.06	0.98	160	2.79	0.08	1.02	532	2.73	0.04	1.00	605	2.79	0.04	0.99	0
T98	388	3.39	0.04	0.81	262	2.82	0.06	1.01	162	3.31	0.07	0.89	558	3.47	0.03	0.78	605	3.20	0.04	0.93	0
T99	359	3.03	0.05	0.92	262	3.05	0.06	0.96	151	2.88	0.08	1.02	480	2.69	0.05	1.04	556	2.91	0.04	0.95	0
T100	356	2.94	0.05	0.91	249	2.77	0.06	1.02	137	2.74	0.09	1.02	449	2.55	0.05	1.06	534	2.64	0.04	1.04	0
T101	400	3.56	0.04	0.71	299	3.18	0.05	0.92	172	3.38	0.07	0.87	557	3.32	0.04	0.84	637	3.38	0.03	0.85	0
T102	409	3.51	0.04	0.73	301	3.09	0.05	0.90	173	3.45	0.06	0.80	562	3.56	0.03	0.64	650	3.43	0.03	0.74	0

Importance Ratings by Subgroups Based on Profession Rule 4

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following is your profession?

	APN				DC				DO				MD				PA				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T103	391	3.63	0.04	0.69	295	3.32	0.05	0.87	167	3.61	0.06	0.73	542	3.64	0.03	0.69	625	3.54	0.03	0.75	0
T104	373	3.63	0.03	0.67	296	3.34	0.05	0.85	167	3.63	0.06	0.71	521	3.69	0.03	0.63	604	3.54	0.03	0.73	0
T105	303	3.26	0.05	0.88	275	3.02	0.06	0.96	151	3.40	0.07	0.86	490	3.44	0.04	0.83	494	3.13	0.04	0.94	0
T106	246	3.17	0.06	0.89	242	2.88	0.06	1.00	137	3.21	0.08	0.99	436	3.35	0.04	0.87	421	3.09	0.05	0.98	0
T107	313	3.66	0.04	0.65	287	3.30	0.06	0.93	157	3.56	0.06	0.74	496	3.64	0.03	0.68	514	3.51	0.03	0.73	0
T108	317	3.68	0.04	0.65	283	3.34	0.05	0.88	155	3.52	0.06	0.76	492	3.65	0.03	0.67	510	3.52	0.03	0.71	0
T109	432	3.76	0.02	0.48	321	3.41	0.04	0.79	183	3.51	0.05	0.72	573	3.52	0.03	0.72	678	3.59	0.03	0.66	0
T110	437	3.66	0.03	0.59	320	3.27	0.05	0.89	177	3.55	0.05	0.67	576	3.51	0.03	0.75	680	3.55	0.03	0.67	0
T111	423	3.56	0.03	0.68	330	3.26	0.05	0.88	175	3.43	0.06	0.76	559	3.33	0.04	0.85	670	3.41	0.03	0.73	0
T112	383	3.36	0.04	0.80	310	3.06	0.05	0.92	164	3.22	0.07	0.93	518	2.96	0.04	0.99	588	3.13	0.04	0.88	0
T113	377	3.32	0.04	0.81	301	3.01	0.05	0.95	163	3.16	0.07	0.90	488	2.90	0.05	0.99	565	3.03	0.04	0.90	0
T114	396	3.47	0.04	0.73	304	3.27	0.05	0.85	168	3.33	0.06	0.77	535	3.18	0.04	0.88	627	3.31	0.03	0.81	0
T115	418	3.67	0.03	0.60	313	3.38	0.05	0.81	172	3.57	0.05	0.67	537	3.41	0.03	0.78	643	3.52	0.03	0.71	0
T116	363	3.74	0.03	0.56	296	3.51	0.04	0.72	166	3.64	0.05	0.65	489	3.68	0.03	0.61	584	3.57	0.03	0.68	0
T117	333	3.62	0.04	0.68	297	3.36	0.05	0.81	158	3.44	0.06	0.78	475	3.43	0.04	0.81	547	3.37	0.03	0.81	0
T118	356	3.74	0.03	0.55	302	3.53	0.04	0.73	160	3.66	0.05	0.58	493	3.65	0.03	0.64	583	3.62	0.03	0.66	0
T119	323	3.48	0.05	0.82	287	3.26	0.05	0.88	148	3.42	0.07	0.87	459	3.39	0.04	0.86	511	3.29	0.04	0.92	0
T120	432	3.81	0.02	0.47	326	3.56	0.04	0.67	177	3.72	0.04	0.57	576	3.77	0.02	0.51	680	3.72	0.02	0.55	0
T121	379	3.39	0.04	0.78	309	3.32	0.05	0.85	159	3.32	0.07	0.87	544	3.29	0.04	0.86	608	3.28	0.03	0.83	0
T122	288	3.46	0.04	0.76	261	3.26	0.06	0.93	137	3.43	0.07	0.84	444	3.36	0.04	0.81	481	3.39	0.04	0.78	0
T123	276	3.61	0.04	0.65	252	3.43	0.05	0.82	135	3.55	0.07	0.76	439	3.49	0.04	0.78	469	3.50	0.03	0.73	0
T124	371	3.39	0.04	0.78	271	3.18	0.06	0.96	153	3.20	0.08	0.98	491	3.25	0.04	0.91	560	3.21	0.04	0.89	0
T125	402	3.21	0.04	0.82	300	2.92	0.05	0.94	169	3.04	0.07	0.94	525	2.89	0.04	0.96	605	3.02	0.04	0.91	0
T126	400	3.28	0.04	0.80	298	3.03	0.05	0.93	169	3.05	0.07	0.92	528	2.94	0.04	0.96	608	3.10	0.04	0.89	0
T127	388	2.98	0.05	0.91	289	2.77	0.06	0.97	161	2.79	0.08	1.00	509	2.51	0.04	1.00	602	2.77	0.04	0.94	0
T128	382	2.83	0.05	0.96	283	2.63	0.06	0.99	153	2.71	0.08	1.04	489	2.46	0.05	1.00	575	2.59	0.04	0.97	1
T129	384	3.00	0.05	0.91	286	2.80	0.06	1.01	159	2.83	0.07	0.94	498	2.60	0.05	1.02	592	2.76	0.04	0.96	0
T130	385	3.40	0.04	0.73	293	3.05	0.06	0.94	161	3.35	0.07	0.84	540	3.41	0.03	0.77	603	3.26	0.03	0.83	0
T131	398	3.52	0.04	0.70	299	3.25	0.05	0.91	170	3.48	0.06	0.80	567	3.61	0.03	0.66	632	3.46	0.03	0.76	0
T132	340	3.21	0.05	0.88	259	2.91	0.06	0.98	153	3.28	0.07	0.88	519	3.29	0.04	0.86	545	3.18	0.03	0.79	0
T133	396	3.78	0.03	0.50	310	3.59	0.04	0.68	172	3.76	0.04	0.58	568	3.87	0.02	0.46	647	3.77	0.02	0.56	0
T134	399	3.72	0.03	0.61	305	3.49	0.04	0.76	171	3.77	0.04	0.55	568	3.81	0.02	0.53	654	3.75	0.02	0.56	0
T135	418	3.76	0.03	0.51	319	3.54	0.04	0.69	176	3.75	0.04	0.53	576	3.83	0.02	0.46	662	3.76	0.02	0.52	0
T136	410	3.64	0.03	0.63	312	3.30	0.05	0.83	172	3.56	0.06	0.73	572	3.62	0.03	0.69	652	3.57	0.03	0.68	0

Importance Ratings by Subgroups Based on Profession Rule 4

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following is your profession?

	APN				DC				DO				MD				PA				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T137	377	3.71	0.03	0.65	301	3.69	0.04	0.61	168	3.67	0.05	0.69	540	3.69	0.03	0.69	593	3.75	0.02	0.59	0
T138	378	3.80	0.03	0.54	302	3.70	0.03	0.58	174	3.83	0.04	0.47	558	3.87	0.02	0.43	608	3.81	0.02	0.50	0
T139	389	3.92	0.02	0.34	303	3.85	0.02	0.41	178	3.92	0.02	0.31	563	3.93	0.01	0.34	623	3.92	0.01	0.31	0
T140	426	3.89	0.02	0.36	317	3.80	0.03	0.47	182	3.86	0.03	0.39	577	3.93	0.01	0.27	660	3.89	0.01	0.35	0
T141	433	3.91	0.02	0.33	310	3.75	0.03	0.50	179	3.87	0.03	0.35	575	3.90	0.01	0.33	673	3.89	0.01	0.33	0
T142	436	3.86	0.02	0.38	325	3.67	0.03	0.61	183	3.84	0.03	0.45	580	3.87	0.02	0.38	683	3.87	0.01	0.39	0
T143	438	3.84	0.02	0.42	324	3.56	0.04	0.64	182	3.79	0.03	0.46	577	3.82	0.02	0.42	684	3.81	0.02	0.43	0
T144	434	3.85	0.02	0.42	326	3.68	0.03	0.57	179	3.84	0.03	0.45	577	3.86	0.02	0.40	683	3.85	0.02	0.40	0
T145	441	3.86	0.02	0.39	329	3.67	0.03	0.54	181	3.86	0.03	0.41	576	3.86	0.02	0.39	689	3.84	0.02	0.40	0
T146	436	3.85	0.02	0.42	332	3.77	0.03	0.51	181	3.87	0.03	0.41	579	3.85	0.02	0.41	685	3.85	0.02	0.39	0

Q1: Which of the following is your profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	APN	444	19.3	19.8	19.8
	DC	339	14.8	15.1	34.8
	DO	185	8.1	8.2	43.1
	MD	587	25.6	26.1	69.2
	PA	693	30.2	30.8	100.0
	Total	2248	97.9	100.0	
Missing	System	49	2.1		
Total		2297	100.0		

APPENDIX K

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Experience Subgroups
(Data for Exclusion Rule 5)

Importance Ratings by Subgroups Based on Experience Rule 5

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been working in your current profession?

	1-10				11-22				23 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	709	3.70	0.02	0.57	739	3.73	0.02	0.59	732	3.77	0.02	0.52	0
T2	717	3.42	0.03	0.81	738	3.41	0.03	0.85	733	3.44	0.03	0.84	0
T3	735	3.74	0.02	0.48	749	3.71	0.02	0.49	746	3.71	0.02	0.50	0
T4	734	3.58	0.02	0.61	747	3.54	0.02	0.62	744	3.53	0.02	0.62	0
T5	734	3.36	0.03	0.72	745	3.28	0.03	0.77	745	3.27	0.03	0.75	0
T6	734	3.66	0.02	0.54	744	3.68	0.02	0.51	742	3.71	0.02	0.50	0
T7	734	3.71	0.02	0.52	746	3.74	0.02	0.50	742	3.73	0.02	0.49	0
T8	731	3.77	0.02	0.49	745	3.76	0.02	0.51	740	3.74	0.02	0.52	0
T9	710	3.64	0.03	0.67	733	3.68	0.02	0.59	729	3.71	0.02	0.59	0
T10	735	3.76	0.02	0.50	748	3.75	0.02	0.52	741	3.75	0.02	0.53	0
T11	728	3.69	0.02	0.58	740	3.66	0.02	0.62	742	3.65	0.02	0.62	0
T12	719	2.98	0.03	0.82	736	2.93	0.03	0.84	738	2.96	0.03	0.81	0
T13	735	3.75	0.02	0.50	744	3.73	0.02	0.51	745	3.79	0.02	0.44	0
T14	732	3.58	0.02	0.60	746	3.51	0.02	0.65	742	3.58	0.02	0.62	0
T15	733	3.87	0.01	0.36	744	3.86	0.01	0.36	743	3.87	0.01	0.37	0
T16	733	3.80	0.02	0.46	748	3.82	0.02	0.43	744	3.83	0.02	0.41	0
T17	729	3.23	0.03	0.79	736	3.24	0.03	0.75	739	3.24	0.03	0.73	0
T18	723	3.45	0.02	0.66	738	3.36	0.03	0.73	741	3.34	0.03	0.69	0
T19	734	3.43	0.03	0.68	744	3.33	0.03	0.76	743	3.34	0.03	0.71	0
T20	734	3.71	0.02	0.56	745	3.72	0.02	0.54	739	3.73	0.02	0.55	0
T21	731	2.89	0.03	0.85	743	2.81	0.03	0.86	736	2.85	0.03	0.84	0
T22	726	2.93	0.03	0.88	740	2.82	0.03	0.93	731	2.87	0.03	0.90	0
T23	730	3.81	0.02	0.44	741	3.81	0.02	0.44	738	3.80	0.02	0.47	0
T24	729	2.92	0.03	0.81	733	2.80	0.03	0.85	737	2.83	0.03	0.87	0
T25	733	3.45	0.03	0.69	745	3.35	0.03	0.74	741	3.35	0.03	0.75	0
T26	721	3.19	0.03	0.82	737	3.17	0.03	0.85	737	3.20	0.03	0.83	0
T27	730	3.81	0.02	0.48	741	3.83	0.02	0.44	738	3.83	0.02	0.45	0
T28	737	3.88	0.01	0.37	746	3.92	0.01	0.27	742	3.91	0.01	0.31	0
T29	733	3.50	0.03	0.68	742	3.53	0.03	0.69	742	3.63	0.02	0.59	0
T30	723	3.66	0.02	0.60	742	3.64	0.02	0.62	739	3.65	0.02	0.57	0
T31	714	2.65	0.04	1.00	725	2.69	0.04	1.01	728	2.70	0.04	1.03	0
T32	726	2.90	0.03	0.86	742	2.83	0.03	0.89	739	2.92	0.03	0.85	0
T33	728	3.83	0.01	0.39	739	3.84	0.01	0.40	732	3.84	0.01	0.40	0

Importance Ratings by Subgroups Based on Experience Rule 5

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been working in your current profession?

	1-10				11-22				23 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T34	723	3.78	0.02	0.48	740	3.79	0.02	0.48	732	3.78	0.02	0.49	0
T35	721	3.62	0.02	0.57	734	3.55	0.02	0.66	726	3.57	0.02	0.67	0
T36	715	3.57	0.02	0.63	732	3.45	0.03	0.72	724	3.47	0.03	0.74	0
T37	713	3.66	0.02	0.62	732	3.64	0.02	0.66	726	3.67	0.02	0.60	0
T38	726	3.43	0.03	0.71	735	3.22	0.03	0.86	734	3.22	0.03	0.83	0
T39	716	3.20	0.03	0.78	728	3.10	0.03	0.89	736	3.11	0.03	0.88	0
T40	718	3.36	0.03	0.74	735	3.25	0.03	0.81	725	3.23	0.03	0.86	0
T41	649	2.86	0.04	0.96	676	2.81	0.04	0.96	668	2.83	0.04	0.96	0
T42	732	3.02	0.03	0.89	739	2.87	0.03	0.94	731	2.93	0.03	0.91	0
T43	719	3.57	0.03	0.69	739	3.51	0.03	0.71	727	3.54	0.03	0.70	0
T44	722	3.62	0.02	0.61	736	3.56	0.02	0.68	722	3.61	0.03	0.68	0
T45	730	3.17	0.03	0.83	739	2.98	0.03	0.91	731	3.02	0.03	0.91	0
T46	724	3.37	0.03	0.76	736	3.24	0.03	0.79	726	3.26	0.03	0.80	0
T47	712	2.86	0.03	0.90	724	2.71	0.04	0.95	717	2.76	0.03	0.92	0
T48	712	3.42	0.03	0.76	737	3.44	0.03	0.77	732	3.46	0.03	0.78	0
T49	729	3.67	0.02	0.56	739	3.58	0.02	0.64	728	3.55	0.03	0.68	0
T50	723	3.84	0.01	0.39	741	3.80	0.02	0.44	727	3.80	0.02	0.46	0
T51	715	3.59	0.02	0.63	737	3.53	0.02	0.65	722	3.49	0.03	0.72	0
T52	724	3.40	0.03	0.75	737	3.25	0.03	0.80	729	3.21	0.03	0.82	0
T53	729	3.52	0.02	0.66	738	3.41	0.03	0.73	731	3.35	0.03	0.77	0
T54	712	3.11	0.03	0.88	724	2.95	0.03	0.92	720	2.93	0.03	0.92	0
T55	703	2.82	0.04	0.95	721	2.75	0.04	0.98	717	2.80	0.04	1.00	0
T56	717	2.77	0.04	0.96	730	2.66	0.04	0.98	725	2.64	0.04	1.00	0
T57	721	3.24	0.03	0.84	730	3.15	0.03	0.84	726	3.14	0.03	0.84	0
T58	723	3.50	0.03	0.72	731	3.37	0.03	0.76	724	3.41	0.03	0.75	0
T59	722	3.25	0.03	0.82	729	3.09	0.03	0.86	721	3.06	0.03	0.88	0
T60	717	3.04	0.03	0.92	723	2.88	0.04	0.95	718	2.91	0.03	0.93	0
T61	717	3.08	0.03	0.89	734	3.07	0.03	0.88	731	3.06	0.03	0.91	0
T62	717	3.05	0.03	0.86	735	2.96	0.03	0.88	727	2.98	0.03	0.90	0
T63	721	3.42	0.03	0.74	737	3.32	0.03	0.78	725	3.31	0.03	0.83	0
T64	717	2.99	0.03	0.88	733	2.85	0.03	0.93	719	2.87	0.03	0.89	0
T65	724	3.40	0.03	0.71	741	3.33	0.03	0.78	733	3.32	0.03	0.81	0
T66	720	3.60	0.02	0.63	741	3.61	0.02	0.65	725	3.56	0.03	0.69	0

Importance Ratings by Subgroups Based on Experience Rule 5

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been working in your current profession?

	1-10				11-22				23 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T67	718	3.59	0.02	0.63	738	3.58	0.02	0.64	726	3.57	0.02	0.66	0
T68	712	3.46	0.03	0.71	738	3.38	0.03	0.74	720	3.36	0.03	0.76	0
T69	728	3.60	0.02	0.63	727	3.57	0.03	0.68	724	3.51	0.03	0.73	0
T70	732	3.05	0.03	0.83	736	2.90	0.03	0.91	737	2.91	0.03	0.91	0
T71	720	3.23	0.03	0.85	727	3.08	0.03	0.92	722	3.07	0.03	0.89	0
T72	727	3.70	0.02	0.58	748	3.67	0.02	0.59	732	3.70	0.02	0.58	0
T73	731	3.36	0.03	0.77	741	3.28	0.03	0.79	733	3.30	0.03	0.79	0
T74	716	3.39	0.03	0.77	730	3.36	0.03	0.77	720	3.39	0.03	0.76	0
T75	730	3.32	0.03	0.76	747	3.20	0.03	0.83	735	3.21	0.03	0.81	0
T76	717	3.25	0.03	0.82	734	3.16	0.03	0.83	733	3.17	0.03	0.86	0
T77	726	3.30	0.03	0.82	743	3.16	0.03	0.88	729	3.19	0.03	0.89	0
T78	722	3.56	0.03	0.72	731	3.49	0.03	0.76	729	3.49	0.03	0.75	0
T79	730	3.60	0.02	0.64	743	3.50	0.03	0.69	741	3.52	0.03	0.71	0
T80	727	3.60	0.02	0.66	735	3.53	0.03	0.68	729	3.55	0.03	0.69	0
T81	725	3.51	0.03	0.72	739	3.45	0.03	0.73	733	3.50	0.03	0.73	0
T82	676	3.43	0.03	0.75	715	3.33	0.03	0.83	697	3.30	0.03	0.83	0
T83	676	3.62	0.03	0.66	707	3.53	0.03	0.76	698	3.53	0.03	0.73	0
T84	631	3.13	0.04	0.90	675	3.01	0.04	0.94	662	2.94	0.04	0.96	0
T85	607	2.86	0.04	0.94	635	2.68	0.04	1.01	643	2.62	0.04	1.01	0
T86	612	2.94	0.04	0.95	636	2.78	0.04	0.98	650	2.78	0.04	0.96	0
T87	612	3.32	0.04	0.87	655	3.27	0.03	0.88	658	3.24	0.04	0.92	0
T88	557	3.06	0.04	0.91	603	2.91	0.04	0.99	596	2.82	0.04	1.00	0
T89	507	2.80	0.04	0.96	529	2.73	0.04	1.02	537	2.55	0.04	1.00	0
T90	732	3.86	0.01	0.40	745	3.82	0.02	0.44	740	3.81	0.02	0.45	0
T91	616	3.65	0.02	0.61	665	3.55	0.03	0.67	680	3.57	0.03	0.67	0
T92	693	3.15	0.03	0.86	712	3.06	0.03	0.89	712	3.01	0.03	0.91	0
T93	678	3.47	0.03	0.72	718	3.35	0.03	0.82	711	3.37	0.03	0.78	0
T94	682	3.57	0.03	0.67	713	3.48	0.03	0.77	703	3.48	0.03	0.75	0
T95	631	3.04	0.04	0.91	670	2.86	0.04	0.97	669	2.80	0.04	0.99	0
T96	611	2.80	0.04	0.96	646	2.58	0.04	1.05	643	2.56	0.04	1.03	0
T97	631	2.95	0.04	0.92	667	2.75	0.04	1.00	667	2.76	0.04	1.00	0
T98	625	3.36	0.03	0.81	674	3.24	0.04	0.92	671	3.22	0.04	0.95	0
T99	567	3.04	0.04	0.89	629	2.85	0.04	0.99	607	2.79	0.04	1.04	0

Importance Ratings by Subgroups Based on Experience Rule 5

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been working in your current profession?

	1-10				11-22				23 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T100	557	2.85	0.04	0.97	598	2.67	0.04	1.01	569	2.59	0.04	1.06	0
T101	669	3.48	0.03	0.78	704	3.32	0.03	0.85	690	3.32	0.03	0.88	0
T102	682	3.43	0.03	0.77	706	3.44	0.03	0.75	703	3.43	0.03	0.76	0
T103	642	3.57	0.03	0.72	687	3.55	0.03	0.77	685	3.55	0.03	0.76	0
T104	620	3.58	0.03	0.69	663	3.56	0.03	0.75	671	3.59	0.03	0.72	0
T105	515	3.24	0.04	0.86	579	3.27	0.04	0.92	613	3.23	0.04	0.94	0
T106	424	3.15	0.04	0.90	510	3.18	0.04	0.98	543	3.14	0.04	0.96	0
T107	525	3.57	0.03	0.71	600	3.52	0.03	0.77	634	3.55	0.03	0.76	0
T108	525	3.56	0.03	0.71	597	3.54	0.03	0.75	627	3.57	0.03	0.73	0
T109	719	3.65	0.02	0.60	726	3.57	0.03	0.69	734	3.50	0.03	0.73	0
T110	723	3.59	0.02	0.65	732	3.50	0.03	0.74	727	3.48	0.03	0.75	0
T111	709	3.47	0.03	0.71	722	3.40	0.03	0.80	720	3.34	0.03	0.83	0
T112	621	3.19	0.04	0.88	660	3.07	0.04	0.94	678	3.13	0.04	0.92	0
T113	597	3.14	0.04	0.88	635	2.99	0.04	0.95	655	3.07	0.04	0.94	0
T114	645	3.39	0.03	0.77	682	3.29	0.03	0.82	698	3.24	0.03	0.87	0
T115	681	3.58	0.03	0.66	703	3.46	0.03	0.77	693	3.48	0.03	0.75	0
T116	600	3.64	0.03	0.65	638	3.61	0.03	0.64	652	3.64	0.03	0.66	0
T117	558	3.48	0.03	0.75	614	3.40	0.03	0.79	633	3.42	0.03	0.81	0
T118	595	3.66	0.03	0.61	640	3.60	0.03	0.66	653	3.66	0.03	0.64	0
T119	530	3.36	0.04	0.86	588	3.32	0.04	0.90	605	3.39	0.04	0.88	0
T120	723	3.73	0.02	0.54	734	3.72	0.02	0.56	727	3.75	0.02	0.55	0
T121	647	3.35	0.03	0.80	676	3.31	0.03	0.82	671	3.29	0.03	0.88	0
T122	481	3.39	0.04	0.82	543	3.35	0.03	0.81	581	3.39	0.03	0.83	0
T123	468	3.49	0.03	0.73	527	3.51	0.03	0.74	569	3.53	0.03	0.76	0
T124	609	3.29	0.03	0.85	613	3.24	0.04	0.87	619	3.22	0.04	0.97	0
T125	663	3.07	0.03	0.89	668	3.01	0.03	0.89	666	2.96	0.04	0.97	0
T126	662	3.15	0.03	0.86	672	3.08	0.03	0.88	665	3.01	0.04	0.97	0
T127	649	2.82	0.04	0.96	651	2.74	0.04	0.97	644	2.68	0.04	0.99	0
T128	623	2.66	0.04	0.99	635	2.63	0.04	0.97	619	2.57	0.04	1.01	0
T129	633	2.83	0.04	0.94	645	2.76	0.04	0.99	638	2.74	0.04	1.01	0
T130	651	3.29	0.03	0.81	665	3.33	0.03	0.81	664	3.30	0.03	0.84	0
T131	673	3.46	0.03	0.76	689	3.48	0.03	0.74	699	3.51	0.03	0.77	0
T132	565	3.18	0.04	0.85	617	3.23	0.03	0.84	628	3.16	0.04	0.90	0

Importance Ratings by Subgroups Based on Experience Rule 5

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been working in your current profession?

	1-10				11-22				23 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T133	669	3.77	0.02	0.54	704	3.78	0.02	0.53	712	3.77	0.02	0.57	0
T134	675	3.71	0.02	0.62	705	3.72	0.02	0.62	712	3.74	0.02	0.58	0
T135	695	3.75	0.02	0.53	725	3.74	0.02	0.56	726	3.75	0.02	0.52	0
T136	682	3.59	0.03	0.68	714	3.53	0.03	0.74	715	3.57	0.03	0.71	0
T137	633	3.71	0.03	0.65	664	3.74	0.02	0.61	674	3.69	0.03	0.68	0
T138	641	3.79	0.02	0.52	686	3.83	0.02	0.49	688	3.81	0.02	0.49	0
T139	659	3.92	0.01	0.31	691	3.91	0.01	0.38	698	3.91	0.01	0.33	0
T140	702	3.88	0.01	0.38	728	3.89	0.01	0.35	726	3.89	0.01	0.34	0
T141	713	3.88	0.01	0.37	726	3.86	0.01	0.38	727	3.88	0.01	0.35	0
T142	723	3.85	0.02	0.41	741	3.83	0.02	0.44	737	3.83	0.02	0.45	0
T143	732	3.79	0.02	0.47	729	3.78	0.02	0.47	738	3.77	0.02	0.49	0
T144	721	3.83	0.02	0.42	739	3.83	0.02	0.45	732	3.83	0.02	0.45	0
T145	735	3.82	0.02	0.43	740	3.82	0.02	0.43	734	3.84	0.02	0.42	0
T146	729	3.84	0.02	0.43	739	3.83	0.02	0.45	737	3.86	0.01	0.39	0

)2: For how many years have you been working in your current profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-10	739	32.2	33.0	33.0
	11-22	752	32.7	33.6	66.6
	23 or more	749	32.6	33.4	100.0
	Total	2240	97.5	100.0	
Missing	System	57	2.5		
Total		2297	100.0		

APPENDIX L

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Primary Responsibility Subgroups
(Data for Exclusion Rule 6)

Importance Ratings by Subgroups Based on Occupational Health as the Prime Work Responsibility Rule 6

*The C column shows the count of subgroups with mean importance values below 2.50

Is occupational health your primary work responsibility?

	No				Yes				
Task	***N***	***Mean***	***SEM***	***SD***	***N***	***Mean***	***SEM***	***SD***	**C***
T1	1093	3.74	0.02	0.55	1097	3.72	0.02	0.58	0
T2	1092	3.40	0.03	0.85	1105	3.45	0.02	0.82	0
T3	1118	3.66	0.02	0.53	1122	3.78	0.01	0.44	0
T4	1112	3.48	0.02	0.66	1123	3.61	0.02	0.57	0
T5	1113	3.24	0.02	0.77	1121	3.37	0.02	0.72	0
T6	1113	3.66	0.02	0.53	1117	3.70	0.02	0.50	0
T7	1110	3.69	0.02	0.52	1122	3.76	0.01	0.48	0
T8	1107	3.76	0.01	0.50	1120	3.75	0.02	0.51	0
T9	1082	3.67	0.02	0.60	1099	3.68	0.02	0.64	0
T10	1112	3.71	0.02	0.56	1122	3.80	0.01	0.47	0
T11	1106	3.70	0.02	0.58	1114	3.63	0.02	0.63	0
T12	1097	3.00	0.02	0.83	1106	2.92	0.02	0.82	0
T13	1115	3.76	0.01	0.48	1119	3.75	0.01	0.49	0
T14	1109	3.56	0.02	0.61	1121	3.55	0.02	0.64	0
T15	1110	3.84	0.01	0.41	1119	3.90	0.01	0.31	0
T16	1114	3.76	0.01	0.50	1121	3.88	0.01	0.34	0
T17	1104	3.23	0.02	0.76	1110	3.24	0.02	0.75	0
T18	1100	3.34	0.02	0.72	1111	3.43	0.02	0.67	0
T19	1113	3.35	0.02	0.73	1118	3.38	0.02	0.70	0
T20	1108	3.67	0.02	0.59	1120	3.77	0.01	0.50	0
T21	1107	2.85	0.03	0.86	1113	2.85	0.03	0.84	0
T22	1098	2.86	0.03	0.92	1109	2.89	0.03	0.89	0
T23	1106	3.74	0.02	0.51	1114	3.87	0.01	0.37	0
T24	1102	2.86	0.03	0.88	1108	2.84	0.02	0.82	0
T25	1111	3.30	0.02	0.77	1118	3.46	0.02	0.67	0
T26	1098	3.14	0.03	0.85	1106	3.23	0.02	0.81	0
T27	1105	3.82	0.01	0.46	1112	3.82	0.01	0.45	0
T28	1114	3.88	0.01	0.36	1121	3.93	0.01	0.27	0
T29	1107	3.48	0.02	0.70	1120	3.62	0.02	0.60	0
T30	1097	3.62	0.02	0.61	1116	3.68	0.02	0.58	0
T31	1073	2.52	0.03	1.00	1104	2.83	0.03	1.00	0
T32	1099	2.85	0.03	0.87	1119	2.91	0.03	0.87	0
T33	1095	3.77	0.01	0.45	1113	3.90	0.01	0.33	0
T34	1097	3.73	0.02	0.52	1109	3.83	0.01	0.44	0
T35	1082	3.53	0.02	0.66	1109	3.62	0.02	0.61	0
T36	1069	3.44	0.02	0.74	1111	3.55	0.02	0.66	0
T37	1076	3.58	0.02	0.67	1104	3.73	0.02	0.58	0
T38	1097	3.35	0.02	0.76	1108	3.24	0.03	0.85	0
T39	1084	3.16	0.03	0.84	1104	3.12	0.03	0.87	0
T40	1085	3.29	0.02	0.79	1101	3.27	0.03	0.83	0
T41	985	2.88	0.03	0.93	1017	2.78	0.03	0.98	0
T42	1098	3.00	0.03	0.89	1112	2.89	0.03	0.93	0
T43	1091	3.45	0.02	0.74	1104	3.63	0.02	0.64	0
T44	1086	3.49	0.02	0.72	1103	3.70	0.02	0.58	0
T45	1096	3.01	0.03	0.89	1114	3.11	0.03	0.88	0

Importance Ratings by Subgroups Based on Occupational Health as the Prime Work Responsibility Rule 6

*The C column shows the count of subgroups with mean importance values below 2.50

Is occupational health your primary work responsibility?

	No				Yes				
T46	1092	3.22	0.02	0.81	1104	3.36	0.02	0.75	0
T47	1072	2.82	0.03	0.91	1092	2.73	0.03	0.94	0
T48	1085	3.30	0.03	0.83	1104	3.58	0.02	0.68	0
T49	1099	3.56	0.02	0.66	1107	3.64	0.02	0.60	0
T50	1090	3.77	0.01	0.47	1111	3.85	0.01	0.39	0
T51	1083	3.50	0.02	0.69	1100	3.57	0.02	0.64	0
T52	1094	3.26	0.02	0.80	1108	3.31	0.02	0.79	0
T53	1098	3.39	0.02	0.74	1109	3.45	0.02	0.71	0
T54	1071	2.98	0.03	0.93	1092	3.01	0.03	0.89	0
T55	1064	2.64	0.03	0.99	1088	2.93	0.03	0.95	0
T56	1079	2.60	0.03	0.99	1103	2.78	0.03	0.97	0
T57	1085	3.17	0.03	0.86	1102	3.19	0.02	0.82	0
T58	1086	3.39	0.02	0.77	1099	3.46	0.02	0.73	0
T59	1084	3.12	0.03	0.87	1097	3.14	0.03	0.84	0
T60	1076	2.89	0.03	0.97	1090	3.00	0.03	0.90	0
T61	1083	2.95	0.03	0.94	1110	3.19	0.03	0.84	0
T62	1086	2.91	0.03	0.91	1103	3.08	0.03	0.84	0
T63	1089	3.27	0.02	0.82	1102	3.42	0.02	0.74	0
T64	1077	2.89	0.03	0.91	1103	2.92	0.03	0.90	0
T65	1098	3.25	0.02	0.81	1111	3.45	0.02	0.71	0
T66	1095	3.47	0.02	0.73	1102	3.71	0.02	0.55	0
T67	1091	3.49	0.02	0.70	1101	3.67	0.02	0.57	0
T68	1084	3.32	0.02	0.78	1096	3.48	0.02	0.69	0
T69	1079	3.48	0.02	0.71	1110	3.64	0.02	0.64	0
T70	1098	2.95	0.03	0.90	1116	2.96	0.03	0.88	0
T71	1077	3.04	0.03	0.92	1101	3.21	0.03	0.85	0
T72	1101	3.65	0.02	0.59	1116	3.73	0.02	0.56	0
T73	1095	3.24	0.02	0.82	1120	3.38	0.02	0.75	0
T74	1072	3.37	0.02	0.76	1103	3.39	0.02	0.77	0
T75	1101	3.23	0.02	0.81	1119	3.26	0.02	0.79	0
T76	1083	3.15	0.03	0.85	1109	3.24	0.02	0.82	0
T77	1098	3.25	0.03	0.84	1110	3.18	0.03	0.89	0
T78	1088	3.44	0.02	0.79	1103	3.59	0.02	0.69	0
T79	1108	3.52	0.02	0.70	1116	3.56	0.02	0.66	0
T80	1094	3.52	0.02	0.71	1107	3.60	0.02	0.65	0
T81	1089	3.45	0.02	0.75	1117	3.53	0.02	0.70	0
T82	996	3.25	0.03	0.85	1101	3.45	0.02	0.75	0
T83	1004	3.44	0.02	0.79	1086	3.67	0.02	0.63	0
T84	970	3.10	0.03	0.91	1006	2.96	0.03	0.96	0
T85	941	2.80	0.03	0.98	953	2.63	0.03	0.99	0
T86	925	2.86	0.03	0.97	981	2.80	0.03	0.97	0
T87	893	3.10	0.03	0.95	1039	3.43	0.03	0.81	0
T88	883	3.04	0.03	0.94	880	2.82	0.03	0.99	0
T89	768	2.75	0.04	1.01	810	2.63	0.03	0.98	0
T90	1108	3.79	0.01	0.47	1118	3.87	0.01	0.38	0

Importance Ratings by Subgroups Based on Occupational Health as the Prime Work Responsibility Rule 6

*The C column shows the count of subgroups with mean importance values below 2.50

Is occupational health your primary work responsibility?

	No				Yes				
T91	954	3.52	0.02	0.70	1014	3.66	0.02	0.59	0
T92	1041	3.04	0.03	0.90	1085	3.11	0.03	0.88	0
T93	1008	3.29	0.03	0.84	1106	3.49	0.02	0.71	0
T94	1010	3.36	0.03	0.81	1097	3.64	0.02	0.63	0
T95	976	2.97	0.03	0.93	1001	2.83	0.03	0.98	0
T96	948	2.74	0.03	1.00	958	2.55	0.03	1.02	0
T97	952	2.86	0.03	0.96	1021	2.78	0.03	0.99	0
T98	923	3.06	0.03	0.96	1055	3.46	0.02	0.79	0
T99	890	3.00	0.03	0.95	921	2.79	0.03	1.01	0
T100	845	2.75	0.04	1.03	883	2.66	0.03	1.01	0
T101	988	3.27	0.03	0.89	1080	3.46	0.02	0.78	0
T102	1012	3.28	0.03	0.83	1085	3.58	0.02	0.66	0
T103	998	3.43	0.03	0.81	1022	3.68	0.02	0.66	0
T104	981	3.43	0.03	0.79	981	3.72	0.02	0.60	0
T105	801	3.04	0.03	0.96	913	3.42	0.03	0.82	0
T106	669	2.94	0.04	1.00	815	3.34	0.03	0.87	0
T107	843	3.47	0.03	0.80	925	3.62	0.02	0.70	0
T108	837	3.48	0.03	0.77	921	3.62	0.02	0.69	0
T109	1083	3.57	0.02	0.69	1108	3.58	0.02	0.67	0
T110	1092	3.48	0.02	0.75	1102	3.56	0.02	0.68	0
T111	1076	3.40	0.02	0.79	1084	3.40	0.02	0.79	0
T112	977	3.17	0.03	0.89	992	3.09	0.03	0.94	0
T113	941	3.07	0.03	0.91	956	3.06	0.03	0.94	0
T114	1000	3.31	0.03	0.83	1033	3.30	0.03	0.81	0
T115	1047	3.49	0.02	0.73	1040	3.51	0.02	0.73	0
T116	987	3.58	0.02	0.67	914	3.68	0.02	0.62	0
T117	928	3.37	0.03	0.81	885	3.50	0.03	0.76	0
T118	987	3.59	0.02	0.68	910	3.69	0.02	0.59	0
T119	883	3.25	0.03	0.92	849	3.47	0.03	0.82	0
T120	1091	3.66	0.02	0.60	1104	3.80	0.01	0.49	0
T121	949	3.25	0.03	0.86	1053	3.37	0.02	0.80	0
T122	776	3.30	0.03	0.85	838	3.44	0.03	0.78	0
T123	747	3.46	0.03	0.77	827	3.55	0.03	0.72	0
T124	886	3.26	0.03	0.89	961	3.24	0.03	0.90	0
T125	980	3.00	0.03	0.93	1024	3.03	0.03	0.90	0
T126	984	3.08	0.03	0.91	1022	3.08	0.03	0.90	0
T127	955	2.78	0.03	0.99	998	2.71	0.03	0.96	0
T128	913	2.64	0.03	1.00	971	2.60	0.03	0.98	0
T129	941	2.78	0.03	1.00	981	2.77	0.03	0.96	0
T130	929	3.19	0.03	0.86	1056	3.41	0.02	0.78	0
T131	983	3.33	0.03	0.84	1086	3.62	0.02	0.64	0
T132	814	3.01	0.03	0.92	1004	3.33	0.03	0.80	0
T133	1007	3.66	0.02	0.64	1088	3.87	0.01	0.43	0
T134	1014	3.60	0.02	0.70	1085	3.83	0.01	0.48	0
T135	1053	3.65	0.02	0.60	1101	3.83	0.01	0.45	0

Importance Ratings by Subgroups Based on Occupational Health as the Prime Work Responsibility Rule 6

*The C column shows the count of subgroups with mean importance values below 2.50

Is occupational health your primary work responsibility?

	No				Yes				
T136	1027	3.45	0.02	0.75	1094	3.66	0.02	0.65	0
T137	948	3.67	0.02	0.68	1032	3.75	0.02	0.61	0
T138	973	3.77	0.02	0.55	1050	3.84	0.01	0.45	0
T139	988	3.90	0.01	0.36	1069	3.93	0.01	0.32	0
T140	1057	3.85	0.01	0.40	1108	3.92	0.01	0.31	0
T141	1070	3.84	0.01	0.39	1103	3.90	0.01	0.33	0
T142	1096	3.80	0.01	0.47	1114	3.87	0.01	0.39	0
T143	1091	3.73	0.02	0.52	1117	3.83	0.01	0.43	0
T144	1091	3.78	0.01	0.48	1111	3.87	0.01	0.38	0
T145	1103	3.77	0.01	0.47	1116	3.87	0.01	0.37	0
T146	1100	3.81	0.01	0.46	1115	3.87	0.01	0.39	0

Q5: Is occupational health your primary work responsibility?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1123	48.9	49.9	49.9
	Yes	1127	49.1	50.1	100.0
	Total	2250	98.0	100.0	
Missing	System	47	2.0		
Total		2297	100.0		

APPENDIX M

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Occupational Health Training Subgroups
(Data for Exclusion Rule 7)

Importance Ratings by Subgroups Based on Occupational Health Training Rule 7

*The C column shows the count of subgroups with mean importance values below 2.50

Have you had training in occupational health?

	No				Yes				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	712	3.70	0.02	0.57	1468	3.74	0.01	0.56	0
T2	719	3.36	0.03	0.85	1468	3.45	0.02	0.82	0
T3	740	3.70	0.02	0.51	1490	3.74	0.01	0.48	0
T4	740	3.50	0.02	0.65	1485	3.57	0.02	0.61	0
T5	740	3.25	0.03	0.76	1484	3.33	0.02	0.75	0
T6	737	3.65	0.02	0.52	1483	3.70	0.01	0.52	0
T7	736	3.67	0.02	0.54	1487	3.75	0.01	0.48	0
T8	736	3.74	0.02	0.52	1482	3.76	0.01	0.50	0
T9	718	3.67	0.02	0.59	1453	3.68	0.02	0.64	0
T10	737	3.72	0.02	0.53	1487	3.77	0.01	0.51	0
T11	735	3.70	0.02	0.55	1477	3.65	0.02	0.64	0
T12	727	2.91	0.03	0.83	1466	2.98	0.02	0.82	0
T13	740	3.71	0.02	0.52	1484	3.78	0.01	0.47	0
T14	738	3.53	0.02	0.62	1482	3.57	0.02	0.63	0
T15	737	3.86	0.01	0.38	1483	3.88	0.01	0.35	0
T16	738	3.78	0.02	0.48	1488	3.84	0.01	0.40	0
T17	733	3.16	0.03	0.78	1472	3.28	0.02	0.74	0
T18	729	3.36	0.03	0.69	1474	3.40	0.02	0.70	0
T19	741	3.33	0.03	0.74	1481	3.38	0.02	0.71	0
T20	735	3.72	0.02	0.54	1484	3.72	0.01	0.55	0
T21	730	2.80	0.03	0.83	1480	2.87	0.02	0.86	0
T22	730	2.84	0.03	0.88	1469	2.89	0.02	0.91	0
T23	733	3.79	0.02	0.45	1477	3.81	0.01	0.45	0
T24	733	2.80	0.03	0.85	1467	2.87	0.02	0.84	0
T25	738	3.34	0.03	0.75	1481	3.40	0.02	0.72	0
T26	726	3.13	0.03	0.83	1468	3.21	0.02	0.83	0
T27	732	3.83	0.02	0.42	1476	3.82	0.01	0.48	0
T28	737	3.87	0.01	0.37	1488	3.92	0.01	0.29	0
T29	734	3.48	0.03	0.68	1484	3.59	0.02	0.64	0
T30	731	3.61	0.02	0.61	1473	3.67	0.02	0.58	0
T31	720	2.56	0.04	1.02	1448	2.73	0.03	1.01	0
T32	732	2.88	0.03	0.86	1477	2.89	0.02	0.87	0
T33	730	3.83	0.01	0.38	1468	3.84	0.01	0.41	0
T34	731	3.76	0.02	0.51	1465	3.79	0.01	0.47	0
T35	721	3.57	0.02	0.64	1462	3.58	0.02	0.64	0
T36	721	3.50	0.03	0.69	1451	3.49	0.02	0.71	0
T37	720	3.61	0.02	0.65	1451	3.68	0.02	0.62	0
T38	728	3.34	0.03	0.77	1468	3.27	0.02	0.83	0
T39	723	3.12	0.03	0.83	1456	3.15	0.02	0.87	0
T40	719	3.31	0.03	0.78	1457	3.26	0.02	0.83	0
T41	633	2.80	0.04	0.96	1359	2.84	0.03	0.96	0
T42	734	2.98	0.03	0.89	1467	2.92	0.02	0.92	0
T43	724	3.51	0.03	0.72	1460	3.56	0.02	0.69	0
T44	722	3.54	0.03	0.68	1458	3.62	0.02	0.65	0
T45	732	3.08	0.03	0.87	1469	3.04	0.02	0.90	0
T46	725	3.26	0.03	0.80	1463	3.30	0.02	0.78	0
T47	717	2.81	0.03	0.93	1439	2.76	0.02	0.93	0

Importance Ratings by Subgroups Based on Occupational Health Training Rule 7

*The C column shows the count of subgroups with mean importance values below 2.50

Have you had training in occupational health?

	No				Yes				
T48	723	3.35	0.03	0.81	1458	3.48	0.02	0.75	0
T49	735	3.60	0.02	0.62	1461	3.60	0.02	0.64	0
T50	728	3.82	0.02	0.42	1463	3.80	0.01	0.44	0
T51	721	3.53	0.02	0.66	1452	3.54	0.02	0.67	0
T52	730	3.34	0.03	0.75	1463	3.26	0.02	0.81	0
T53	735	3.45	0.03	0.70	1463	3.41	0.02	0.73	0
T54	715	3.00	0.03	0.91	1439	2.99	0.02	0.91	0
T55	712	2.71	0.04	0.98	1431	2.83	0.03	0.97	0
T56	723	2.65	0.04	0.99	1450	2.71	0.03	0.98	0
T57	726	3.17	0.03	0.83	1453	3.18	0.02	0.85	0
T58	726	3.40	0.03	0.76	1451	3.43	0.02	0.74	0
T59	725	3.15	0.03	0.84	1447	3.12	0.02	0.87	0
T60	718	2.94	0.04	0.96	1439	2.95	0.02	0.93	0
T61	727	3.01	0.03	0.93	1458	3.10	0.02	0.88	0
T62	723	2.99	0.03	0.90	1458	3.00	0.02	0.87	0
T63	726	3.34	0.03	0.82	1455	3.35	0.02	0.77	0
T64	722	2.90	0.03	0.93	1449	2.90	0.02	0.89	0
T65	732	3.31	0.03	0.79	1467	3.37	0.02	0.75	0
T66	726	3.54	0.03	0.69	1461	3.61	0.02	0.64	0
T67	722	3.52	0.03	0.68	1461	3.61	0.02	0.62	0
T68	718	3.35	0.03	0.75	1454	3.42	0.02	0.73	0
T69	719	3.55	0.02	0.66	1461	3.57	0.02	0.69	0
T70	735	2.97	0.03	0.89	1469	2.94	0.02	0.89	0
T71	716	3.10	0.03	0.91	1452	3.14	0.02	0.88	0
T72	731	3.67	0.02	0.60	1476	3.70	0.01	0.57	0
T73	732	3.29	0.03	0.81	1473	3.32	0.02	0.77	0
T74	711	3.35	0.03	0.77	1454	3.39	0.02	0.76	0
T75	732	3.22	0.03	0.82	1478	3.25	0.02	0.79	0
T76	721	3.16	0.03	0.86	1461	3.21	0.02	0.83	0
T77	733	3.24	0.03	0.84	1465	3.20	0.02	0.88	0
T78	725	3.51	0.03	0.74	1456	3.52	0.02	0.75	0
T79	736	3.55	0.02	0.67	1478	3.53	0.02	0.68	0
T80	726	3.56	0.03	0.70	1465	3.56	0.02	0.67	0
T81	726	3.46	0.03	0.74	1470	3.50	0.02	0.72	0
T82	678	3.34	0.03	0.81	1412	3.36	0.02	0.80	0
T83	675	3.51	0.03	0.74	1408	3.58	0.02	0.71	0
T84	638	3.03	0.04	0.91	1331	3.02	0.03	0.95	0
T85	616	2.75	0.04	0.96	1272	2.70	0.03	1.00	0
T86	608	2.84	0.04	0.95	1293	2.82	0.03	0.98	0
T87	618	3.24	0.04	0.90	1307	3.29	0.02	0.89	0
T88	579	2.95	0.04	0.95	1181	2.92	0.03	0.98	0
T89	504	2.66	0.04	0.98	1068	2.70	0.03	1.00	0
T90	737	3.80	0.02	0.45	1479	3.85	0.01	0.42	0
T91	620	3.55	0.03	0.70	1342	3.61	0.02	0.63	0
T92	706	3.04	0.03	0.89	1412	3.08	0.02	0.89	0
T93	684	3.37	0.03	0.80	1422	3.41	0.02	0.77	0
T94	684	3.42	0.03	0.79	1415	3.55	0.02	0.70	0
T95	645	2.90	0.04	0.96	1325	2.90	0.03	0.96	0
T96	615	2.70	0.04	0.98	1286	2.62	0.03	1.03	0

Importance Ratings by Subgroups Based on Occupational Health Training Rule 7

*The C column shows the count of subgroups with mean importance values below 2.50

Have you had training in occupational health?

	No				Yes				
T97	626	2.85	0.04	0.94	1339	2.80	0.03	1.00	0
T98	633	3.21	0.04	0.92	1339	3.30	0.02	0.89	0
T99	584	2.90	0.04	0.96	1221	2.88	0.03	1.00	0
T100	558	2.72	0.04	1.00	1164	2.70	0.03	1.03	0
T101	676	3.35	0.03	0.84	1385	3.38	0.02	0.84	0
T102	679	3.32	0.03	0.80	1410	3.48	0.02	0.74	0
T103	658	3.52	0.03	0.76	1354	3.57	0.02	0.74	0
T104	641	3.51	0.03	0.75	1314	3.61	0.02	0.70	0
T105	513	3.16	0.04	0.88	1196	3.28	0.03	0.92	0
T106	421	3.05	0.05	0.94	1059	3.20	0.03	0.95	0
T107	538	3.49	0.03	0.77	1224	3.56	0.02	0.74	0
T108	534	3.50	0.03	0.75	1218	3.58	0.02	0.72	0
T109	727	3.57	0.03	0.67	1455	3.57	0.02	0.68	0
T110	732	3.51	0.03	0.71	1453	3.53	0.02	0.72	0
T111	712	3.38	0.03	0.78	1439	3.41	0.02	0.79	0
T112	634	3.12	0.04	0.90	1325	3.13	0.03	0.92	0
T113	606	3.04	0.04	0.90	1283	3.07	0.03	0.94	0
T114	671	3.29	0.03	0.80	1355	3.31	0.02	0.83	0
T115	690	3.48	0.03	0.72	1389	3.52	0.02	0.73	0
T116	632	3.59	0.03	0.66	1263	3.64	0.02	0.64	0
T117	593	3.38	0.03	0.79	1214	3.46	0.02	0.78	0
T118	624	3.61	0.03	0.66	1268	3.65	0.02	0.64	0
T119	557	3.29	0.04	0.90	1169	3.38	0.03	0.87	0
T120	727	3.69	0.02	0.58	1458	3.76	0.01	0.53	0
T121	631	3.22	0.03	0.87	1364	3.36	0.02	0.82	0
T122	491	3.28	0.04	0.85	1117	3.42	0.02	0.80	0
T123	478	3.43	0.04	0.78	1090	3.54	0.02	0.73	0
T124	590	3.19	0.04	0.92	1251	3.28	0.02	0.88	0
T125	644	2.97	0.04	0.93	1352	3.04	0.02	0.91	0
T126	648	3.03	0.04	0.92	1351	3.10	0.02	0.90	0
T127	633	2.72	0.04	0.96	1312	2.76	0.03	0.98	0
T128	601	2.56	0.04	0.97	1276	2.64	0.03	1.00	0
T129	620	2.73	0.04	0.97	1296	2.80	0.03	0.98	0
T130	626	3.19	0.03	0.85	1351	3.35	0.02	0.81	0
T131	662	3.36	0.03	0.80	1400	3.54	0.02	0.73	0
T132	547	3.08	0.04	0.90	1266	3.23	0.02	0.85	0
T133	669	3.70	0.02	0.60	1418	3.80	0.01	0.52	0
T134	675	3.66	0.02	0.65	1416	3.75	0.02	0.58	0
T135	700	3.70	0.02	0.57	1445	3.76	0.01	0.53	0
T136	688	3.51	0.03	0.72	1425	3.58	0.02	0.70	0
T137	626	3.68	0.03	0.68	1347	3.72	0.02	0.63	0
T138	639	3.82	0.02	0.48	1377	3.80	0.01	0.51	0
T139	656	3.91	0.01	0.35	1394	3.92	0.01	0.33	0
T140	701	3.87	0.01	0.35	1455	3.89	0.01	0.36	0
T141	712	3.86	0.01	0.37	1451	3.88	0.01	0.36	0
T142	730	3.82	0.02	0.45	1470	3.84	0.01	0.43	0
T143	729	3.76	0.02	0.47	1469	3.79	0.01	0.48	0
T144	721	3.80	0.02	0.45	1471	3.84	0.01	0.43	0
T145	733	3.80	0.02	0.45	1476	3.84	0.01	0.41	0

Importance Ratings by Subgroups Based on Occupational Health Training Rule 7

*The C column shows the count of subgroups with mean importance values below 2.50

Have you had training in occupational health?

	No				Yes				
T146	727	3.81	0.02	0.46	1478	3.85	0.01	0.41	0

Q6: Have you had training in occupational health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	745	32.4	33.3	33.3
	Yes	1495	65.1	66.7	100.0
	Total	2240	97.5	100.0	
Missing	System	57	2.5		
Total		2297	100.0		

APPENDIX N

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Physical Examination Training Subgroups
(Data for Exclusion Rule 8)

Importance Ratings by Subgroups Based on Rule 8
Taking a Physical Examination Training Course

*The C column shows the count of subgroups with mean importance values below 2.50

Have you attended a training course for CMV driver physical examinations?

	No				Yes				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	1571	3.72	0.01	0.58	603	3.75	0.02	0.53	0
T2	1573	3.39	0.02	0.85	608	3.49	0.03	0.79	0
T3	1607	3.71	0.01	0.50	617	3.76	0.02	0.45	0
T4	1603	3.53	0.02	0.63	617	3.60	0.02	0.60	0
T5	1603	3.28	0.02	0.76	615	3.36	0.03	0.72	0
T6	1599	3.68	0.01	0.52	615	3.70	0.02	0.50	0
T7	1601	3.72	0.01	0.51	617	3.75	0.02	0.46	0
T8	1596	3.76	0.01	0.51	615	3.76	0.02	0.50	0
T9	1557	3.67	0.02	0.62	609	3.68	0.02	0.61	0
T10	1604	3.75	0.01	0.51	615	3.76	0.02	0.52	0
T11	1589	3.68	0.02	0.60	616	3.64	0.02	0.62	0
T12	1576	2.96	0.02	0.83	612	2.96	0.03	0.81	0
T13	1605	3.75	0.01	0.49	614	3.77	0.02	0.47	0
T14	1599	3.56	0.02	0.62	617	3.54	0.03	0.63	0
T15	1597	3.86	0.01	0.37	618	3.89	0.01	0.35	0
T16	1601	3.80	0.01	0.45	618	3.87	0.02	0.38	0
T17	1586	3.23	0.02	0.77	612	3.25	0.03	0.73	0
T18	1583	3.37	0.02	0.70	613	3.40	0.03	0.70	0
T19	1603	3.36	0.02	0.72	613	3.39	0.03	0.70	0
T20	1596	3.70	0.01	0.57	616	3.77	0.02	0.49	0
T21	1590	2.84	0.02	0.86	615	2.86	0.03	0.83	0
T22	1581	2.86	0.02	0.91	609	2.90	0.04	0.88	0
T23	1592	3.79	0.01	0.46	612	3.84	0.02	0.41	0
T24	1581	2.85	0.02	0.86	613	2.84	0.03	0.81	0
T25	1600	3.36	0.02	0.74	613	3.45	0.03	0.69	0
T26	1573	3.16	0.02	0.85	615	3.24	0.03	0.79	0
T27	1588	3.82	0.01	0.47	613	3.84	0.02	0.44	0
T28	1604	3.89	0.01	0.34	615	3.93	0.01	0.27	0
T29	1594	3.53	0.02	0.67	617	3.62	0.02	0.60	0
T30	1581	3.64	0.02	0.60	617	3.67	0.02	0.57	0
T31	1556	2.65	0.03	1.02	606	2.76	0.04	0.99	0
T32	1589	2.87	0.02	0.86	614	2.91	0.04	0.89	0
T33	1583	3.82	0.01	0.41	610	3.87	0.01	0.36	0
T34	1584	3.77	0.01	0.49	608	3.81	0.02	0.46	0
T35	1567	3.57	0.02	0.63	609	3.59	0.03	0.64	0
T36	1561	3.49	0.02	0.71	606	3.51	0.03	0.67	0
T37	1561	3.63	0.02	0.65	605	3.73	0.02	0.58	0
T38	1582	3.32	0.02	0.79	609	3.22	0.04	0.86	0
T39	1567	3.16	0.02	0.84	605	3.08	0.04	0.90	0
T40	1565	3.30	0.02	0.80	606	3.24	0.03	0.83	0
T41	1430	2.86	0.02	0.94	557	2.76	0.04	0.99	0
T42	1584	2.99	0.02	0.90	611	2.82	0.04	0.93	0

Importance Ratings by Subgroups Based on Rule 8
Taking a Physical Examination Training Course

*The C column shows the count of subgroups with mean importance values below 2.50

Have you attended a training course for CMV driver physical examinations?

	No				Yes				
T43	1572	3.53	0.02	0.69	606	3.57	0.03	0.70	0
T44	1570	3.57	0.02	0.67	607	3.65	0.03	0.63	0
T45	1582	3.06	0.02	0.88	613	3.05	0.04	0.92	0
T46	1574	3.28	0.02	0.80	607	3.33	0.03	0.76	0
T47	1547	2.80	0.02	0.92	602	2.72	0.04	0.95	0
T48	1568	3.40	0.02	0.78	607	3.55	0.03	0.72	0
T49	1578	3.60	0.02	0.63	610	3.59	0.03	0.63	0
T50	1576	3.80	0.01	0.44	609	3.83	0.02	0.42	0
T51	1571	3.54	0.02	0.66	598	3.52	0.03	0.67	0
T52	1578	3.31	0.02	0.78	607	3.22	0.03	0.83	0
T53	1582	3.44	0.02	0.71	608	3.38	0.03	0.74	0
T54	1549	3.03	0.02	0.91	601	2.92	0.04	0.92	0
T55	1539	2.75	0.03	0.98	597	2.89	0.04	0.96	0
T56	1562	2.68	0.02	0.99	603	2.73	0.04	0.98	0
T57	1564	3.19	0.02	0.84	608	3.16	0.03	0.84	0
T58	1568	3.43	0.02	0.75	604	3.41	0.03	0.75	0
T59	1562	3.14	0.02	0.85	605	3.12	0.04	0.86	0
T60	1554	2.93	0.02	0.95	598	2.99	0.04	0.92	0
T61	1571	3.03	0.02	0.91	606	3.18	0.03	0.85	0
T62	1569	2.98	0.02	0.88	605	3.06	0.04	0.87	0
T63	1571	3.34	0.02	0.79	605	3.38	0.03	0.76	0
T64	1566	2.90	0.02	0.90	600	2.91	0.04	0.91	0
T65	1584	3.34	0.02	0.77	610	3.41	0.03	0.75	0
T66	1578	3.56	0.02	0.66	604	3.67	0.03	0.62	0
T67	1573	3.55	0.02	0.66	603	3.65	0.02	0.60	0
T68	1558	3.39	0.02	0.74	608	3.44	0.03	0.73	0
T69	1564	3.55	0.02	0.69	609	3.60	0.03	0.66	0
T70	1584	2.97	0.02	0.88	614	2.92	0.04	0.90	0
T71	1560	3.13	0.02	0.89	604	3.12	0.04	0.87	0
T72	1588	3.68	0.01	0.59	613	3.73	0.02	0.56	0
T73	1584	3.30	0.02	0.78	615	3.34	0.03	0.78	0
T74	1551	3.37	0.02	0.77	608	3.39	0.03	0.76	0
T75	1588	3.23	0.02	0.80	615	3.26	0.03	0.80	0
T76	1566	3.17	0.02	0.84	609	3.26	0.03	0.82	0
T77	1583	3.24	0.02	0.85	609	3.15	0.04	0.91	0
T78	1569	3.50	0.02	0.75	607	3.55	0.03	0.73	0
T79	1595	3.54	0.02	0.69	614	3.55	0.03	0.66	0
T80	1579	3.56	0.02	0.68	608	3.57	0.03	0.66	0
T81	1578	3.47	0.02	0.73	612	3.53	0.03	0.70	0
T82	1491	3.33	0.02	0.81	591	3.41	0.03	0.78	0
T83	1485	3.51	0.02	0.74	591	3.68	0.03	0.63	0
T84	1405	3.03	0.02	0.92	554	3.00	0.04	0.95	0
T85	1351	2.74	0.03	0.98	527	2.66	0.04	1.02	0
T86	1357	2.82	0.03	0.97	534	2.84	0.04	0.98	0

Importance Ratings by Subgroups Based on Rule 8
Taking a Physical Examination Training Course

*The C column shows the count of subgroups with mean importance values below 2.50

Have you attended a training course for CMV driver physical examinations?

	No				Yes				
T87	1352	3.21	0.02	0.91	565	3.43	0.03	0.81	0
T88	1258	2.94	0.03	0.97	492	2.89	0.04	0.99	0
T89	1110	2.68	0.03	1.01	457	2.71	0.05	0.97	0
T90	1594	3.82	0.01	0.44	616	3.87	0.02	0.39	0
T91	1384	3.57	0.02	0.67	569	3.64	0.03	0.60	0
T92	1526	3.08	0.02	0.89	584	3.05	0.04	0.89	0
T93	1503	3.38	0.02	0.79	596	3.44	0.03	0.75	0
T94	1492	3.47	0.02	0.75	599	3.62	0.03	0.66	0
T95	1411	2.89	0.03	0.97	551	2.91	0.04	0.94	0
T96	1363	2.65	0.03	1.02	529	2.62	0.04	1.02	0
T97	1400	2.82	0.03	0.97	558	2.83	0.04	1.00	0
T98	1391	3.21	0.02	0.92	572	3.43	0.03	0.83	0
T99	1284	2.92	0.03	0.97	512	2.81	0.05	1.02	0
T100	1220	2.70	0.03	1.02	494	2.72	0.05	1.02	0
T101	1463	3.36	0.02	0.84	590	3.39	0.03	0.85	0
T102	1487	3.38	0.02	0.77	596	3.55	0.03	0.72	0
T103	1431	3.54	0.02	0.75	574	3.60	0.03	0.73	0
T104	1400	3.54	0.02	0.74	546	3.68	0.03	0.66	0
T105	1169	3.18	0.03	0.93	528	3.39	0.04	0.85	0
T106	993	3.09	0.03	0.97	479	3.30	0.04	0.90	0
T107	1231	3.52	0.02	0.76	522	3.61	0.03	0.73	0
T108	1224	3.53	0.02	0.73	520	3.62	0.03	0.73	0
T109	1565	3.57	0.02	0.68	609	3.58	0.03	0.69	0
T110	1569	3.51	0.02	0.72	608	3.55	0.03	0.72	0
T111	1548	3.40	0.02	0.78	597	3.40	0.03	0.80	0
T112	1396	3.16	0.02	0.91	556	3.06	0.04	0.93	0
T113	1339	3.09	0.03	0.92	544	2.99	0.04	0.94	0
T114	1442	3.31	0.02	0.81	576	3.29	0.03	0.84	0
T115	1494	3.50	0.02	0.73	578	3.51	0.03	0.73	0
T116	1369	3.60	0.02	0.67	516	3.69	0.03	0.59	0
T117	1296	3.40	0.02	0.81	501	3.50	0.03	0.74	0
T118	1370	3.62	0.02	0.65	512	3.68	0.03	0.62	0
T119	1225	3.31	0.03	0.91	493	3.48	0.04	0.80	0
T120	1568	3.71	0.01	0.56	610	3.80	0.02	0.52	0
T121	1404	3.28	0.02	0.85	582	3.41	0.03	0.80	0
T122	1113	3.34	0.03	0.83	487	3.46	0.04	0.78	0
T123	1084	3.49	0.02	0.76	478	3.56	0.03	0.71	0
T124	1296	3.24	0.03	0.91	537	3.28	0.04	0.87	0
T125	1424	3.01	0.02	0.93	565	3.04	0.04	0.90	0
T126	1422	3.08	0.02	0.91	569	3.07	0.04	0.90	0
T127	1390	2.75	0.03	0.98	550	2.73	0.04	0.96	0
T128	1333	2.62	0.03	0.99	536	2.62	0.04	0.98	0
T129	1358	2.78	0.03	0.97	549	2.77	0.04	1.00	0
T130	1382	3.25	0.02	0.83	586	3.43	0.03	0.79	0

Importance Ratings by Subgroups Based on Taking a Physical Examination Training Course Rule 8

*The C column shows the count of subgroups with mean importance values below 2.50

Have you attended a training course for CMV driver physical examinations?

	No				Yes				
T131	1461	3.42	0.02	0.79	592	3.64	0.03	0.65	0
T132	1247	3.13	0.03	0.89	558	3.33	0.03	0.81	0
T133	1488	3.73	0.02	0.59	593	3.88	0.02	0.40	0
T134	1492	3.68	0.02	0.64	593	3.83	0.02	0.50	0
T135	1531	3.72	0.01	0.56	606	3.82	0.02	0.48	0
T136	1513	3.54	0.02	0.72	593	3.61	0.03	0.68	0
T137	1391	3.69	0.02	0.67	576	3.78	0.02	0.57	0
T138	1427	3.80	0.01	0.51	582	3.83	0.02	0.49	0
T139	1451	3.91	0.01	0.35	590	3.93	0.01	0.31	0
T140	1545	3.87	0.01	0.38	605	3.93	0.01	0.29	0
T141	1557	3.87	0.01	0.36	602	3.89	0.01	0.36	0
T142	1587	3.83	0.01	0.44	608	3.85	0.02	0.42	0
T143	1582	3.76	0.01	0.48	610	3.83	0.02	0.45	0
T144	1579	3.81	0.01	0.44	608	3.87	0.02	0.41	0
T145	1593	3.81	0.01	0.44	611	3.88	0.01	0.37	0
T146	1592	3.83	0.01	0.44	609	3.88	0.02	0.37	0

Q7: Have you attended a training course for CMV driver physical examinations?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1615	70.3	72.3	72.3
	Yes	619	26.9	27.7	100.0
	Total	2234	97.3	100.0	
Missing	System	63	2.7		
Total		2297	100.0		

APPENDIX O

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Average Number of Physical Examinations
Performed Per Month Subgroups
(Data for Exclusion Rule 9)

Importance Ratings by Subgroups Based on the Number of Examinations Performed Each Month Rule 9

*The C column shows the count of subgroups with mean importance values below 2.50

On average, how many physical examinations for CMV drivers do you personally perform each month?

	0				1-4				5-19				20-48				49 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C**
T1	71	3.79	0.07	0.56	429	3.76	0.02	0.49	555	3.72	0.03	0.61	477	3.76	0.02	0.51	641	3.68	0.02	0.61	0
T2	70	3.50	0.10	0.81	431	3.35	0.04	0.86	555	3.43	0.04	0.84	478	3.50	0.03	0.76	644	3.39	0.03	0.87	0
T3	72	3.43	0.08	0.69	438	3.65	0.03	0.54	570	3.71	0.02	0.49	483	3.81	0.02	0.41	658	3.76	0.02	0.46	0
T4	71	3.46	0.07	0.61	433	3.46	0.03	0.67	569	3.51	0.03	0.65	485	3.62	0.03	0.58	657	3.61	0.02	0.59	0
T5	72	3.25	0.09	0.76	436	3.22	0.04	0.78	567	3.23	0.03	0.77	482	3.38	0.03	0.74	658	3.38	0.03	0.70	0
T6	72	3.61	0.06	0.49	435	3.68	0.02	0.51	568	3.70	0.02	0.51	483	3.72	0.02	0.49	653	3.65	0.02	0.55	0
T7	72	3.68	0.07	0.55	435	3.70	0.02	0.51	566	3.72	0.02	0.51	484	3.78	0.02	0.47	656	3.73	0.02	0.50	0
T8	72	3.76	0.06	0.52	432	3.77	0.02	0.50	565	3.77	0.02	0.49	483	3.78	0.02	0.49	655	3.72	0.02	0.53	0
T9	71	3.68	0.07	0.55	422	3.67	0.03	0.63	549	3.66	0.03	0.63	477	3.74	0.03	0.55	646	3.65	0.03	0.65	0
T10	72	3.83	0.05	0.41	438	3.72	0.03	0.55	564	3.73	0.02	0.52	486	3.76	0.02	0.54	657	3.79	0.02	0.47	0
T11	72	3.82	0.05	0.42	432	3.74	0.03	0.54	567	3.68	0.03	0.62	482	3.67	0.03	0.60	650	3.60	0.03	0.65	0
T12	72	3.19	0.09	0.80	429	3.01	0.04	0.82	558	3.00	0.03	0.81	480	2.99	0.04	0.81	647	2.86	0.03	0.84	0
T13	71	3.79	0.05	0.44	436	3.77	0.02	0.47	569	3.78	0.02	0.48	486	3.78	0.02	0.46	654	3.71	0.02	0.52	0
T14	72	3.74	0.06	0.53	433	3.58	0.03	0.60	568	3.54	0.03	0.62	484	3.58	0.03	0.62	655	3.53	0.03	0.65	0
T15	72	3.86	0.04	0.35	436	3.81	0.02	0.43	565	3.84	0.02	0.41	485	3.92	0.01	0.29	653	3.90	0.01	0.31	0
T16	72	3.76	0.05	0.46	437	3.72	0.02	0.51	569	3.78	0.02	0.50	484	3.87	0.02	0.36	655	3.89	0.01	0.33	0
T17	71	3.34	0.09	0.75	435	3.19	0.04	0.79	562	3.24	0.03	0.72	479	3.31	0.03	0.74	651	3.21	0.03	0.76	0
T18	72	3.38	0.10	0.83	430	3.33	0.03	0.71	564	3.34	0.03	0.71	478	3.49	0.03	0.65	648	3.40	0.03	0.68	0
T19	72	3.40	0.10	0.82	436	3.33	0.04	0.74	567	3.32	0.03	0.74	483	3.47	0.03	0.65	654	3.36	0.03	0.71	0
T20	71	3.73	0.07	0.61	435	3.71	0.03	0.55	566	3.68	0.02	0.57	483	3.71	0.03	0.58	654	3.78	0.02	0.47	0
T21	72	3.01	0.11	0.90	433	2.85	0.04	0.86	564	2.84	0.04	0.86	482	2.91	0.04	0.85	651	2.81	0.03	0.84	0
T22	72	3.07	0.11	0.89	429	2.87	0.04	0.91	555	2.85	0.04	0.90	480	2.93	0.04	0.92	652	2.84	0.03	0.89	0
T23	69	3.65	0.07	0.59	432	3.70	0.02	0.52	565	3.76	0.02	0.51	479	3.86	0.02	0.39	655	3.88	0.01	0.35	0
T24	71	3.06	0.11	0.91	431	2.89	0.04	0.87	562	2.87	0.04	0.83	480	2.87	0.04	0.84	647	2.78	0.03	0.83	0
T25	72	3.35	0.09	0.79	437	3.30	0.04	0.75	565	3.32	0.03	0.76	482	3.44	0.03	0.72	654	3.46	0.03	0.66	0
T26	71	3.17	0.10	0.83	431	3.19	0.04	0.83	560	3.14	0.04	0.86	479	3.25	0.04	0.82	645	3.19	0.03	0.81	0
T27	72	3.83	0.05	0.41	438	3.86	0.02	0.42	560	3.83	0.02	0.41	478	3.82	0.02	0.48	650	3.80	0.02	0.49	0
T28	72	3.88	0.04	0.33	437	3.89	0.02	0.34	569	3.88	0.02	0.37	480	3.92	0.01	0.29	658	3.93	0.01	0.27	0
T29	72	3.56	0.08	0.65	433	3.51	0.03	0.69	565	3.51	0.03	0.67	483	3.61	0.03	0.62	655	3.59	0.02	0.64	0
T30	72	3.68	0.06	0.50	429	3.61	0.03	0.62	554	3.64	0.03	0.59	485	3.68	0.03	0.57	654	3.65	0.02	0.61	0
T31	68	2.93	0.11	0.94	424	2.56	0.05	1.02	551	2.59	0.04	1.02	473	2.72	0.05	1.01	643	2.78	0.04	1.00	0
T32	72	2.89	0.12	0.99	429	2.89	0.04	0.86	562	2.90	0.04	0.86	480	2.91	0.04	0.85	656	2.86	0.03	0.89	0
T33	68	3.69	0.07	0.58	433	3.78	0.02	0.45	558	3.81	0.02	0.42	478	3.86	0.02	0.36	652	3.90	0.01	0.32	0

Importance Ratings by Subgroups Based on the Number of Examinations Performed Each Month Rule 9

*The C column shows the count of subgroups with mean importance values below 2.50

On average, how many physical examinations for CMV drivers do you personally perform each month?

	0				1-4				5-19				20-48				49 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C**
T34	69	3.61	0.08	0.62	435	3.74	0.02	0.50	555	3.76	0.02	0.52	477	3.80	0.02	0.47	650	3.83	0.02	0.44	0
T35	66	3.58	0.08	0.66	427	3.54	0.03	0.68	555	3.55	0.03	0.62	479	3.62	0.03	0.61	648	3.60	0.02	0.63	0
T36	65	3.38	0.10	0.80	425	3.41	0.04	0.76	550	3.48	0.03	0.70	478	3.53	0.03	0.67	646	3.56	0.03	0.66	0
T37	64	3.56	0.09	0.69	420	3.55	0.03	0.69	552	3.61	0.03	0.65	477	3.72	0.03	0.58	651	3.73	0.02	0.59	0
T38	69	3.39	0.10	0.81	434	3.37	0.04	0.78	557	3.30	0.03	0.77	474	3.31	0.04	0.82	653	3.21	0.03	0.85	0
T39	68	3.35	0.10	0.82	427	3.16	0.04	0.85	557	3.15	0.04	0.85	474	3.21	0.04	0.84	645	3.04	0.03	0.87	0
T40	66	3.33	0.10	0.81	425	3.31	0.04	0.79	554	3.27	0.03	0.82	477	3.31	0.04	0.80	645	3.25	0.03	0.82	0
T41	63	3.08	0.12	0.94	391	2.99	0.05	0.89	511	2.82	0.04	0.94	433	2.83	0.05	0.99	586	2.72	0.04	0.99	0
T42	70	3.16	0.10	0.86	433	3.02	0.04	0.90	556	2.95	0.04	0.90	476	2.95	0.04	0.92	656	2.86	0.04	0.93	0
T43	68	3.28	0.11	0.94	430	3.44	0.03	0.73	554	3.49	0.03	0.71	476	3.59	0.03	0.67	650	3.66	0.02	0.62	0
T44	69	3.48	0.10	0.80	425	3.48	0.03	0.71	555	3.52	0.03	0.70	475	3.64	0.03	0.62	647	3.73	0.02	0.55	0
T45	72	3.10	0.10	0.89	427	3.00	0.04	0.88	558	3.01	0.04	0.89	478	3.14	0.04	0.88	656	3.09	0.03	0.89	0
T46	72	3.46	0.08	0.67	426	3.26	0.04	0.81	555	3.22	0.04	0.83	477	3.30	0.03	0.76	648	3.35	0.03	0.76	0
T47	70	2.89	0.10	0.88	420	2.88	0.04	0.92	550	2.80	0.04	0.90	472	2.79	0.04	0.94	635	2.66	0.04	0.94	0
T48	70	3.31	0.11	0.94	429	3.29	0.04	0.84	551	3.34	0.03	0.81	476	3.52	0.03	0.69	647	3.60	0.03	0.66	0
T49	71	3.39	0.10	0.84	428	3.53	0.03	0.68	560	3.59	0.03	0.62	481	3.68	0.03	0.56	647	3.64	0.02	0.60	0
T50	70	3.67	0.07	0.61	430	3.72	0.02	0.51	557	3.80	0.02	0.44	475	3.85	0.02	0.37	651	3.87	0.01	0.37	0
T51	69	3.39	0.09	0.75	427	3.48	0.03	0.68	552	3.51	0.03	0.69	474	3.63	0.03	0.60	643	3.56	0.03	0.65	0
T52	71	3.24	0.11	0.89	430	3.27	0.04	0.80	555	3.28	0.03	0.80	479	3.31	0.04	0.78	648	3.31	0.03	0.78	0
T53	70	3.31	0.10	0.83	429	3.39	0.03	0.72	561	3.43	0.03	0.69	480	3.45	0.03	0.74	648	3.45	0.03	0.72	0
T54	69	3.07	0.12	0.99	418	2.98	0.05	0.94	551	3.01	0.04	0.91	473	3.03	0.04	0.91	635	2.98	0.04	0.89	0
T55	68	2.78	0.13	1.06	418	2.64	0.05	0.98	541	2.68	0.04	0.98	472	2.88	0.04	0.97	636	2.94	0.04	0.94	0
T56	69	2.87	0.11	0.92	425	2.60	0.05	0.98	547	2.62	0.04	0.99	478	2.74	0.04	0.97	645	2.78	0.04	0.99	0
T57	69	3.19	0.10	0.79	422	3.21	0.04	0.84	558	3.17	0.04	0.84	476	3.23	0.04	0.82	643	3.14	0.03	0.85	0
T58	69	3.41	0.09	0.77	427	3.38	0.04	0.77	556	3.41	0.03	0.75	472	3.50	0.03	0.69	645	3.43	0.03	0.76	0
T59	69	3.22	0.10	0.80	420	3.12	0.04	0.89	556	3.12	0.04	0.83	473	3.17	0.04	0.86	642	3.12	0.03	0.87	0
T60	69	2.88	0.12	1.01	419	2.89	0.05	0.96	550	2.90	0.04	0.93	472	3.01	0.04	0.92	637	3.02	0.04	0.93	0
T61	71	3.18	0.11	0.90	425	3.00	0.05	0.93	551	2.97	0.04	0.92	479	3.16	0.04	0.86	649	3.16	0.03	0.86	0
T62	72	3.11	0.11	0.97	426	2.97	0.04	0.90	556	2.92	0.04	0.90	473	3.06	0.04	0.84	644	3.05	0.03	0.87	0
T63	71	3.42	0.09	0.75	427	3.26	0.04	0.86	556	3.31	0.03	0.80	473	3.37	0.03	0.75	644	3.43	0.03	0.75	0
T64	71	3.18	0.10	0.85	421	2.90	0.04	0.90	550	2.88	0.04	0.91	475	2.93	0.04	0.91	645	2.89	0.04	0.90	0
T65	71	3.28	0.10	0.83	428	3.28	0.04	0.81	560	3.28	0.03	0.81	479	3.39	0.03	0.74	653	3.47	0.03	0.70	0

Importance Ratings by Subgroups Based on the Number of Examinations Performed Each Month Rule 9

*The C column shows the count of subgroups with mean importance values below 2.50

On average, how many physical examinations for CMV drivers do you personally perform each month?

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Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C**
T66	70	3.41	0.09	0.77	429	3.47	0.04	0.74	558	3.52	0.03	0.71	473	3.66	0.03	0.58	649	3.71	0.02	0.54	0
T67	70	3.40	0.10	0.81	425	3.47	0.03	0.70	559	3.50	0.03	0.69	472	3.65	0.03	0.60	647	3.69	0.02	0.54	0
T68	70	3.37	0.09	0.73	419	3.29	0.04	0.81	555	3.37	0.03	0.74	473	3.45	0.03	0.71	646	3.48	0.03	0.70	0
T69	71	3.49	0.08	0.67	418	3.51	0.04	0.72	544	3.52	0.03	0.69	482	3.56	0.03	0.67	655	3.66	0.02	0.62	0
T70	71	3.10	0.11	0.91	427	2.96	0.04	0.89	562	2.93	0.04	0.90	483	3.00	0.04	0.88	653	2.93	0.03	0.87	0
T71	69	3.32	0.10	0.83	420	3.09	0.04	0.91	547	3.10	0.04	0.90	473	3.12	0.04	0.91	649	3.17	0.03	0.84	0
T72	71	3.63	0.07	0.59	431	3.67	0.03	0.62	557	3.68	0.02	0.56	484	3.72	0.03	0.56	655	3.71	0.02	0.57	0
T73	71	3.21	0.10	0.83	422	3.26	0.04	0.82	560	3.27	0.03	0.80	485	3.36	0.04	0.77	656	3.38	0.03	0.73	0
T74	68	3.44	0.08	0.68	420	3.36	0.04	0.80	546	3.35	0.03	0.78	477	3.43	0.03	0.72	644	3.37	0.03	0.78	0
T75	71	3.38	0.09	0.76	426	3.26	0.04	0.82	562	3.21	0.03	0.80	484	3.29	0.04	0.78	658	3.22	0.03	0.80	0
T76	69	3.32	0.10	0.85	427	3.22	0.04	0.85	551	3.13	0.04	0.84	477	3.21	0.04	0.82	648	3.22	0.03	0.83	0
T77	71	3.39	0.11	0.90	429	3.31	0.04	0.82	557	3.21	0.04	0.86	483	3.22	0.04	0.86	647	3.14	0.04	0.90	0
T78	67	3.37	0.10	0.85	423	3.33	0.04	0.84	558	3.47	0.03	0.78	478	3.60	0.03	0.70	649	3.63	0.03	0.64	0
T79	71	3.68	0.06	0.53	430	3.54	0.03	0.69	562	3.54	0.03	0.66	485	3.55	0.03	0.68	657	3.54	0.03	0.68	0
T80	70	3.59	0.08	0.65	426	3.57	0.03	0.71	560	3.52	0.03	0.68	478	3.60	0.03	0.64	649	3.57	0.03	0.69	0
T81	71	3.54	0.09	0.73	427	3.47	0.04	0.73	556	3.42	0.03	0.77	484	3.54	0.03	0.72	649	3.53	0.03	0.69	0
T82	65	3.38	0.10	0.84	378	3.23	0.04	0.82	519	3.21	0.04	0.85	475	3.41	0.04	0.80	644	3.50	0.03	0.72	0
T83	66	3.48	0.10	0.81	386	3.46	0.04	0.75	522	3.43	0.04	0.80	460	3.61	0.03	0.67	641	3.71	0.02	0.59	0
T84	66	3.20	0.10	0.83	381	3.15	0.05	0.89	497	3.04	0.04	0.91	438	3.05	0.04	0.90	580	2.90	0.04	0.99	0
T85	63	3.06	0.12	0.98	362	2.84	0.05	0.99	482	2.74	0.04	0.97	420	2.69	0.05	1.00	548	2.61	0.04	0.98	0
T86	63	2.97	0.12	0.98	358	2.90	0.05	0.97	480	2.80	0.04	0.98	426	2.89	0.05	0.94	566	2.77	0.04	0.96	0
T87	62	3.15	0.13	1.02	343	3.16	0.05	0.91	471	3.09	0.04	0.97	429	3.28	0.04	0.88	614	3.50	0.03	0.75	0
T88	61	3.11	0.13	1.00	333	3.12	0.05	0.88	452	2.97	0.05	0.96	386	2.88	0.05	0.99	517	2.79	0.04	1.00	0
T89	56	2.93	0.12	0.87	297	2.75	0.06	0.98	381	2.66	0.05	1.02	360	2.75	0.05	0.99	474	2.61	0.05	0.99	0
T90	70	3.79	0.06	0.48	431	3.74	0.03	0.52	566	3.83	0.02	0.44	485	3.85	0.02	0.38	656	3.89	0.01	0.37	0
T91	69	3.64	0.07	0.57	358	3.49	0.04	0.70	476	3.54	0.03	0.70	440	3.66	0.03	0.58	610	3.64	0.02	0.62	0
T92	69	3.28	0.09	0.78	398	3.02	0.05	0.91	537	3.09	0.04	0.88	467	3.07	0.04	0.91	636	3.07	0.03	0.87	0
T93	68	3.50	0.09	0.74	375	3.27	0.04	0.84	527	3.26	0.04	0.85	477	3.47	0.03	0.74	651	3.54	0.03	0.65	0
T94	69	3.48	0.10	0.83	382	3.32	0.04	0.81	525	3.35	0.04	0.83	468	3.63	0.03	0.62	648	3.69	0.02	0.58	0
T95	68	3.24	0.10	0.83	387	2.96	0.05	0.92	494	2.89	0.04	0.97	434	2.97	0.04	0.91	582	2.79	0.04	1.00	0
T96	67	3.06	0.12	1.01	367	2.73	0.05	0.99	488	2.61	0.05	1.02	416	2.69	0.05	1.02	556	2.54	0.04	1.02	0
T97	67	3.18	0.12	0.95	370	2.83	0.05	0.95	500	2.77	0.04	0.98	431	2.88	0.05	0.98	593	2.79	0.04	0.99	0

Importance Ratings by Subgroups Based on the Number of Examinations Performed Each Month Rule 9

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On average, how many physical examinations for CMV drivers do you personally perform each month?

	0				1-4				5-19				20-48				49 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C**
T98	66	3.23	0.12	0.97	359	3.03	0.05	0.93	481	3.12	0.04	0.95	440	3.27	0.04	0.92	622	3.54	0.03	0.72	0
T99	67	3.19	0.11	0.91	345	2.99	0.05	0.96	459	2.92	0.05	0.96	392	2.86	0.05	1.00	540	2.78	0.04	1.00	0
T100	62	3.06	0.12	0.97	319	2.74	0.06	1.00	433	2.67	0.05	1.04	387	2.67	0.05	1.04	517	2.72	0.04	0.99	0
T101	68	3.41	0.10	0.81	378	3.24	0.05	0.88	507	3.24	0.04	0.90	461	3.39	0.04	0.86	642	3.53	0.03	0.72	0
T102	69	3.38	0.09	0.71	387	3.20	0.04	0.82	525	3.36	0.04	0.82	466	3.49	0.03	0.75	639	3.61	0.02	0.62	0
T103	68	3.66	0.07	0.59	386	3.39	0.04	0.83	502	3.43	0.04	0.82	447	3.65	0.03	0.68	605	3.70	0.03	0.63	0
T104	67	3.54	0.10	0.80	381	3.37	0.04	0.79	491	3.45	0.04	0.81	430	3.70	0.03	0.60	580	3.74	0.02	0.59	0
T105	63	3.22	0.11	0.89	305	3.01	0.05	0.91	400	3.01	0.05	1.02	379	3.38	0.04	0.83	558	3.47	0.03	0.80	0
T106	57	3.09	0.12	0.89	255	2.91	0.06	0.95	348	2.91	0.06	1.07	333	3.32	0.05	0.85	483	3.36	0.04	0.86	0
T107	64	3.58	0.09	0.73	327	3.45	0.04	0.77	436	3.46	0.04	0.81	388	3.62	0.04	0.73	541	3.61	0.03	0.71	0
T108	64	3.61	0.08	0.63	327	3.46	0.04	0.75	434	3.48	0.04	0.79	382	3.62	0.04	0.72	539	3.62	0.03	0.68	0
T109	69	3.49	0.09	0.76	422	3.53	0.03	0.70	554	3.56	0.03	0.66	478	3.60	0.03	0.67	649	3.61	0.03	0.67	0
T110	72	3.61	0.08	0.70	420	3.51	0.04	0.73	558	3.47	0.03	0.75	476	3.57	0.03	0.71	650	3.55	0.03	0.69	0
T111	72	3.60	0.08	0.71	416	3.39	0.04	0.79	550	3.40	0.03	0.76	466	3.39	0.04	0.80	638	3.39	0.03	0.81	0
T112	66	3.48	0.10	0.79	378	3.14	0.05	0.92	489	3.15	0.04	0.89	431	3.15	0.04	0.91	587	3.06	0.04	0.95	0
T113	64	3.47	0.10	0.80	365	3.06	0.05	0.93	477	3.03	0.04	0.91	413	3.10	0.05	0.92	563	3.03	0.04	0.95	0
T114	69	3.51	0.09	0.76	379	3.31	0.04	0.82	518	3.29	0.04	0.82	435	3.37	0.04	0.78	616	3.27	0.03	0.84	0
T115	68	3.60	0.08	0.69	404	3.53	0.03	0.69	531	3.49	0.03	0.73	450	3.56	0.03	0.69	618	3.47	0.03	0.77	0
T116	67	3.70	0.08	0.65	376	3.65	0.03	0.59	496	3.58	0.03	0.69	408	3.64	0.03	0.66	539	3.65	0.03	0.64	0
T117	64	3.53	0.10	0.78	358	3.36	0.04	0.83	471	3.39	0.04	0.81	389	3.49	0.04	0.77	517	3.48	0.03	0.76	0
T118	68	3.63	0.09	0.71	371	3.58	0.04	0.68	493	3.59	0.03	0.67	408	3.68	0.03	0.62	542	3.69	0.03	0.60	0
T119	64	3.45	0.10	0.78	334	3.25	0.05	0.92	454	3.27	0.05	0.97	371	3.44	0.04	0.80	494	3.44	0.04	0.83	0
T120	70	3.63	0.08	0.68	419	3.60	0.03	0.60	559	3.68	0.03	0.61	479	3.82	0.02	0.45	651	3.81	0.02	0.49	0
T121	67	3.60	0.09	0.72	368	3.25	0.04	0.84	489	3.25	0.04	0.86	443	3.35	0.04	0.86	622	3.35	0.03	0.80	0
T122	57	3.56	0.08	0.60	295	3.27	0.05	0.85	381	3.25	0.05	0.90	364	3.46	0.04	0.77	507	3.47	0.03	0.76	0
T123	56	3.61	0.08	0.59	279	3.44	0.05	0.77	366	3.40	0.04	0.81	352	3.61	0.04	0.70	507	3.56	0.03	0.71	0
T124	56	3.66	0.09	0.69	356	3.30	0.04	0.85	448	3.27	0.04	0.88	415	3.26	0.04	0.90	560	3.15	0.04	0.94	0
T125	64	3.27	0.11	0.86	393	3.06	0.05	0.90	506	3.00	0.04	0.95	428	3.00	0.04	0.93	600	2.97	0.04	0.90	0
T126	65	3.31	0.11	0.86	391	3.13	0.04	0.85	502	3.10	0.04	0.93	438	3.08	0.04	0.90	597	2.99	0.04	0.93	0
T127	65	3.09	0.11	0.90	372	2.78	0.05	1.00	491	2.79	0.04	0.99	420	2.73	0.05	0.96	592	2.67	0.04	0.95	0
T128	62	2.97	0.13	1.04	356	2.63	0.05	0.98	472	2.66	0.05	0.99	415	2.61	0.05	0.99	568	2.54	0.04	0.99	0
T129	62	3.18	0.12	0.91	371	2.78	0.05	1.00	479	2.80	0.04	0.98	422	2.77	0.05	0.99	574	2.72	0.04	0.97	0

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T130	60	3.30	0.10	0.81	359	3.20	0.05	0.86	485	3.18	0.04	0.87	450	3.35	0.04	0.79	620	3.43	0.03	0.78	0
T131	63	3.43	0.09	0.73	384	3.32	0.04	0.84	510	3.36	0.04	0.84	459	3.58	0.03	0.69	639	3.62	0.03	0.64	0
T132	54	3.06	0.13	0.92	305	2.95	0.06	0.97	437	3.06	0.04	0.90	408	3.31	0.04	0.82	602	3.34	0.03	0.78	0
T133	65	3.62	0.08	0.65	381	3.60	0.04	0.72	526	3.69	0.03	0.61	468	3.85	0.02	0.41	639	3.90	0.02	0.39	0
T134	66	3.52	0.09	0.75	385	3.50	0.04	0.77	531	3.66	0.03	0.65	464	3.82	0.02	0.52	638	3.87	0.02	0.42	0
T135	66	3.71	0.07	0.55	406	3.56	0.03	0.68	541	3.70	0.02	0.56	476	3.79	0.02	0.50	648	3.87	0.02	0.40	0
T136	63	3.67	0.08	0.60	391	3.35	0.04	0.82	531	3.46	0.03	0.75	472	3.62	0.03	0.66	649	3.73	0.02	0.58	0
T137	62	3.58	0.08	0.62	360	3.62	0.04	0.77	495	3.67	0.03	0.68	429	3.74	0.03	0.61	619	3.79	0.02	0.55	0
T138	63	3.86	0.04	0.35	372	3.78	0.03	0.54	506	3.78	0.02	0.52	442	3.82	0.02	0.52	625	3.84	0.02	0.45	0
T139	62	3.87	0.04	0.34	377	3.88	0.02	0.41	512	3.92	0.01	0.30	452	3.91	0.02	0.36	636	3.94	0.01	0.30	0
T140	66	3.86	0.04	0.35	403	3.83	0.02	0.45	547	3.87	0.02	0.37	480	3.91	0.01	0.32	651	3.93	0.01	0.30	0
T141	65	3.86	0.04	0.35	410	3.80	0.02	0.44	557	3.85	0.02	0.39	479	3.92	0.01	0.29	645	3.91	0.01	0.33	0
T142	67	3.78	0.06	0.45	424	3.77	0.02	0.48	563	3.80	0.02	0.50	482	3.88	0.02	0.36	656	3.89	0.01	0.35	0
T143	65	3.62	0.07	0.60	424	3.65	0.03	0.59	568	3.79	0.02	0.46	478	3.83	0.02	0.40	654	3.84	0.02	0.40	0
T144	65	3.71	0.08	0.63	427	3.73	0.03	0.53	563	3.82	0.02	0.44	477	3.87	0.02	0.36	653	3.89	0.01	0.38	0
T145	66	3.70	0.07	0.55	431	3.71	0.03	0.54	566	3.82	0.02	0.42	480	3.87	0.02	0.36	657	3.89	0.01	0.35	0
T146	69	3.77	0.06	0.49	434	3.76	0.02	0.51	562	3.84	0.02	0.42	482	3.87	0.02	0.38	650	3.88	0.01	0.38	0

Q10: On average, how many physical examinations for CMV drivers do you personally perform each month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	72	3.1	3.2	3.2
	1-4	440	19.2	19.7	22.9
	5-19	572	24.9	25.6	48.6
	20-48	487	21.2	21.8	70.4
	49 or more	660	28.7	29.6	100.0
	Total	2231	97.1	100.0	
Missing	System	66	2.9		
Total		2297	100.0		

APPENDIX P

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Medical Examination Experience Subgroups
(Data for Exclusion Rule 10)

Importance Ratings by Subgroups Based on Experience Performing Medical Examinations Rule 10

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been performing physical examinations for CMV drivers?

	1-5				6-11				12-17				18 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	528	3.73	0.02	0.53	671	3.71	0.02	0.57	409	3.76	0.03	0.58	540	3.72	0.03	0.59	0
T2	530	3.43	0.04	0.82	677	3.45	0.03	0.81	410	3.39	0.04	0.86	538	3.41	0.04	0.85	0
T3	542	3.71	0.02	0.51	693	3.73	0.02	0.48	412	3.77	0.02	0.46	551	3.72	0.02	0.47	0
T4	543	3.53	0.03	0.62	691	3.57	0.02	0.63	410	3.59	0.03	0.59	549	3.53	0.03	0.61	0
T5	542	3.29	0.03	0.72	690	3.33	0.03	0.74	411	3.33	0.04	0.76	549	3.26	0.03	0.77	0
T6	543	3.61	0.02	0.56	689	3.71	0.02	0.50	408	3.72	0.02	0.48	548	3.69	0.02	0.51	0
T7	542	3.69	0.02	0.54	691	3.75	0.02	0.49	412	3.77	0.02	0.47	545	3.72	0.02	0.51	0
T8	540	3.77	0.02	0.49	690	3.76	0.02	0.50	410	3.77	0.02	0.46	546	3.73	0.02	0.54	0
T9	521	3.62	0.03	0.67	674	3.71	0.02	0.59	404	3.69	0.03	0.60	542	3.69	0.03	0.61	0
T10	543	3.74	0.02	0.51	692	3.76	0.02	0.50	412	3.78	0.02	0.51	546	3.73	0.02	0.55	0
T11	536	3.66	0.03	0.61	688	3.71	0.02	0.56	406	3.65	0.03	0.63	549	3.64	0.03	0.63	0
T12	528	2.97	0.04	0.81	684	2.98	0.03	0.83	404	2.94	0.04	0.83	545	2.93	0.04	0.82	0
T13	541	3.73	0.02	0.52	692	3.76	0.02	0.50	410	3.74	0.02	0.48	550	3.80	0.02	0.44	0
T14	540	3.56	0.03	0.60	691	3.56	0.02	0.65	410	3.56	0.03	0.61	548	3.55	0.03	0.62	0
T15	540	3.85	0.02	0.41	689	3.88	0.01	0.35	410	3.88	0.02	0.33	549	3.88	0.02	0.35	0
T16	541	3.78	0.02	0.49	691	3.83	0.02	0.42	412	3.86	0.02	0.35	550	3.84	0.02	0.42	0
T17	532	3.19	0.04	0.82	687	3.30	0.03	0.74	406	3.23	0.04	0.71	548	3.23	0.03	0.73	0
T18	532	3.39	0.03	0.70	683	3.44	0.03	0.69	408	3.38	0.03	0.70	548	3.34	0.03	0.69	0
T19	537	3.37	0.03	0.72	692	3.39	0.03	0.72	410	3.36	0.03	0.70	551	3.35	0.03	0.71	0
T20	540	3.70	0.02	0.56	690	3.73	0.02	0.55	409	3.70	0.03	0.56	548	3.77	0.02	0.48	0
T21	537	2.85	0.04	0.86	685	2.89	0.03	0.87	410	2.86	0.04	0.81	548	2.80	0.04	0.84	0
T22	530	2.93	0.04	0.88	686	2.92	0.04	0.92	406	2.83	0.04	0.89	545	2.80	0.04	0.90	0
T23	538	3.76	0.02	0.51	689	3.83	0.02	0.42	406	3.83	0.02	0.39	548	3.82	0.02	0.45	0
T24	536	2.87	0.04	0.83	681	2.89	0.03	0.87	407	2.84	0.04	0.82	544	2.79	0.04	0.84	0
T25	543	3.43	0.03	0.69	689	3.40	0.03	0.73	407	3.40	0.04	0.72	548	3.32	0.03	0.76	0
T26	531	3.19	0.03	0.81	681	3.21	0.03	0.85	404	3.20	0.04	0.80	547	3.17	0.04	0.84	0
T27	541	3.79	0.02	0.48	686	3.83	0.02	0.47	405	3.83	0.02	0.43	545	3.84	0.02	0.45	0
T28	544	3.88	0.02	0.36	692	3.90	0.01	0.34	409	3.94	0.01	0.24	548	3.91	0.01	0.31	0
T29	544	3.46	0.03	0.69	687	3.57	0.03	0.67	410	3.62	0.03	0.61	545	3.60	0.03	0.62	0
T30	533	3.62	0.03	0.61	683	3.66	0.02	0.60	407	3.67	0.03	0.56	549	3.64	0.03	0.60	0
T31	528	2.61	0.04	1.00	666	2.69	0.04	1.02	405	2.69	0.05	1.00	535	2.69	0.04	1.02	0
T32	538	2.86	0.04	0.86	682	2.90	0.03	0.89	408	2.88	0.04	0.84	547	2.91	0.04	0.86	0
T33	534	3.81	0.02	0.43	684	3.85	0.01	0.38	405	3.87	0.02	0.37	544	3.85	0.02	0.36	0

Importance Ratings by Subgroups Based on Experience Performing Medical Examinations Rule 10

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been performing physical examinations for CMV drivers?

	1-5				6-11				12-17				18 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T34	532	3.78	0.02	0.46	680	3.80	0.02	0.47	407	3.80	0.02	0.46	544	3.78	0.02	0.51	0
T35	534	3.61	0.03	0.60	668	3.62	0.02	0.58	404	3.55	0.03	0.68	545	3.53	0.03	0.68	0
T36	529	3.52	0.03	0.69	669	3.54	0.03	0.68	400	3.49	0.03	0.69	542	3.44	0.03	0.74	0
T37	521	3.63	0.03	0.66	670	3.67	0.02	0.62	404	3.68	0.03	0.60	545	3.67	0.03	0.62	0
T38	538	3.42	0.03	0.72	674	3.34	0.03	0.80	407	3.24	0.04	0.81	544	3.15	0.04	0.87	0
T39	530	3.22	0.04	0.82	668	3.17	0.03	0.83	404	3.09	0.04	0.86	545	3.04	0.04	0.90	0
T40	533	3.37	0.03	0.74	672	3.32	0.03	0.78	405	3.24	0.04	0.83	537	3.18	0.04	0.88	0
T41	482	2.84	0.04	0.98	622	2.87	0.04	0.95	370	2.82	0.05	0.93	489	2.77	0.04	0.98	0
T42	536	3.01	0.04	0.90	685	2.96	0.04	0.92	407	2.83	0.05	0.93	540	2.91	0.04	0.90	0
T43	530	3.55	0.03	0.69	680	3.56	0.03	0.71	403	3.53	0.03	0.64	542	3.55	0.03	0.69	0
T44	532	3.59	0.03	0.63	677	3.61	0.02	0.65	402	3.57	0.03	0.65	536	3.63	0.03	0.66	0
T45	539	3.15	0.04	0.84	679	3.10	0.03	0.89	406	2.98	0.05	0.92	543	2.98	0.04	0.89	0
T46	534	3.36	0.03	0.76	676	3.33	0.03	0.81	403	3.30	0.04	0.73	541	3.16	0.04	0.83	0
T47	527	2.86	0.04	0.92	667	2.80	0.04	0.93	403	2.71	0.05	0.91	526	2.72	0.04	0.93	0
T48	524	3.37	0.03	0.80	675	3.49	0.03	0.75	407	3.47	0.04	0.74	543	3.45	0.03	0.76	0
T49	537	3.62	0.03	0.61	679	3.67	0.02	0.56	406	3.58	0.03	0.62	543	3.54	0.03	0.69	0
T50	538	3.81	0.02	0.43	676	3.83	0.02	0.40	403	3.82	0.02	0.42	543	3.80	0.02	0.45	0
T51	532	3.55	0.03	0.67	670	3.60	0.02	0.61	403	3.52	0.03	0.64	539	3.49	0.03	0.72	0
T52	535	3.34	0.03	0.78	679	3.36	0.03	0.77	407	3.26	0.04	0.78	538	3.18	0.04	0.82	0
T53	536	3.46	0.03	0.71	682	3.50	0.03	0.69	405	3.39	0.04	0.73	543	3.35	0.03	0.76	0
T54	520	3.07	0.04	0.92	669	3.08	0.03	0.87	398	2.92	0.05	0.92	537	2.88	0.04	0.93	0
T55	520	2.76	0.04	0.98	661	2.83	0.04	0.97	397	2.76	0.05	0.96	534	2.81	0.04	0.98	0
T56	531	2.74	0.04	0.98	670	2.74	0.04	0.99	404	2.65	0.05	0.95	537	2.63	0.04	1.01	0
T57	533	3.19	0.04	0.87	672	3.26	0.03	0.80	403	3.12	0.04	0.83	539	3.13	0.04	0.86	0
T58	534	3.43	0.03	0.77	677	3.49	0.03	0.71	398	3.43	0.04	0.73	537	3.36	0.03	0.77	0
T59	534	3.20	0.04	0.85	671	3.18	0.03	0.84	400	3.08	0.04	0.90	534	3.06	0.04	0.86	0
T60	529	3.04	0.04	0.94	673	2.98	0.04	0.93	396	2.87	0.05	0.92	529	2.89	0.04	0.93	0
T61	530	3.09	0.04	0.89	677	3.09	0.04	0.92	403	3.08	0.04	0.87	540	3.05	0.04	0.88	0
T62	532	3.02	0.04	0.87	675	3.05	0.03	0.88	404	2.98	0.04	0.86	535	2.94	0.04	0.89	0
T63	533	3.38	0.03	0.77	677	3.39	0.03	0.77	402	3.35	0.04	0.76	537	3.28	0.03	0.81	0
T64	531	2.94	0.04	0.89	672	2.96	0.03	0.90	401	2.84	0.04	0.89	533	2.85	0.04	0.91	0
T65	535	3.34	0.03	0.77	679	3.41	0.03	0.75	407	3.35	0.04	0.74	545	3.33	0.03	0.80	0
T66	531	3.57	0.03	0.66	674	3.62	0.02	0.64	408	3.63	0.03	0.62	542	3.58	0.03	0.67	0

Importance Ratings by Subgroups Based on Experience Performing Medical Examinations Rule 10

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been performing physical examinations for CMV drivers?

	1-5				6-11				12-17				18 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T67	529	3.56	0.03	0.65	675	3.62	0.02	0.63	404	3.58	0.03	0.63	541	3.58	0.03	0.65	0
T68	522	3.42	0.03	0.72	674	3.46	0.03	0.72	404	3.39	0.04	0.73	537	3.34	0.03	0.78	0
T69	530	3.58	0.03	0.66	675	3.60	0.02	0.64	407	3.60	0.03	0.64	534	3.50	0.03	0.75	0
T70	534	3.00	0.04	0.87	688	3.03	0.03	0.87	412	2.85	0.04	0.88	539	2.90	0.04	0.92	0
T71	525	3.17	0.04	0.88	680	3.21	0.03	0.86	405	3.05	0.04	0.89	526	3.03	0.04	0.91	0
T72	539	3.69	0.03	0.60	684	3.71	0.02	0.56	410	3.70	0.03	0.57	541	3.69	0.02	0.58	0
T73	537	3.31	0.03	0.80	685	3.32	0.03	0.78	408	3.36	0.04	0.74	543	3.28	0.03	0.79	0
T74	527	3.38	0.03	0.75	673	3.43	0.03	0.76	403	3.35	0.04	0.76	531	3.35	0.03	0.78	0
T75	538	3.30	0.03	0.76	687	3.29	0.03	0.81	412	3.23	0.04	0.76	543	3.14	0.04	0.85	0
T76	531	3.24	0.04	0.81	674	3.20	0.03	0.84	408	3.18	0.04	0.82	539	3.16	0.04	0.87	0
T77	534	3.28	0.04	0.82	686	3.24	0.03	0.85	409	3.16	0.04	0.85	537	3.15	0.04	0.94	0
T78	531	3.55	0.03	0.73	677	3.56	0.03	0.72	407	3.49	0.04	0.74	538	3.48	0.03	0.77	0
T79	538	3.57	0.03	0.67	685	3.57	0.03	0.67	410	3.51	0.03	0.69	548	3.51	0.03	0.70	0
T80	534	3.54	0.03	0.71	680	3.60	0.03	0.66	404	3.57	0.03	0.64	542	3.56	0.03	0.69	0
T81	533	3.45	0.03	0.76	676	3.49	0.03	0.75	409	3.54	0.03	0.62	544	3.50	0.03	0.72	0
T82	495	3.40	0.03	0.77	644	3.39	0.03	0.80	400	3.29	0.04	0.83	522	3.33	0.04	0.81	0
T83	495	3.59	0.03	0.69	643	3.58	0.03	0.72	390	3.57	0.04	0.74	526	3.53	0.03	0.69	0
T84	455	3.15	0.04	0.88	619	3.04	0.04	0.95	368	3.00	0.05	0.96	497	2.91	0.04	0.94	0
T85	442	2.85	0.05	0.95	580	2.77	0.04	0.99	354	2.68	0.05	1.00	478	2.55	0.05	0.99	0
T86	444	2.92	0.05	0.96	591	2.85	0.04	0.99	351	2.84	0.05	0.96	485	2.73	0.04	0.94	0
T87	447	3.28	0.04	0.88	602	3.30	0.04	0.87	357	3.28	0.05	0.87	491	3.27	0.04	0.90	0
T88	410	3.09	0.05	0.92	543	2.99	0.04	0.95	329	2.84	0.06	1.00	446	2.76	0.05	1.00	0
T89	366	2.77	0.05	0.95	487	2.77	0.05	1.00	298	2.70	0.06	1.02	401	2.50	0.05	0.99	0
T90	539	3.85	0.02	0.40	689	3.84	0.02	0.42	411	3.87	0.02	0.38	546	3.79	0.02	0.48	0
T91	450	3.61	0.03	0.65	608	3.59	0.03	0.65	363	3.62	0.03	0.64	507	3.55	0.03	0.65	0
T92	507	3.12	0.04	0.85	655	3.09	0.04	0.90	396	3.02	0.04	0.88	527	3.02	0.04	0.92	0
T93	502	3.44	0.03	0.72	650	3.39	0.03	0.80	398	3.40	0.04	0.78	527	3.37	0.03	0.79	0
T94	499	3.51	0.03	0.72	647	3.51	0.03	0.76	397	3.55	0.03	0.68	526	3.50	0.03	0.72	0
T95	452	3.04	0.04	0.93	620	2.92	0.04	0.97	370	2.88	0.05	0.95	500	2.75	0.04	0.98	0
T96	436	2.84	0.05	0.97	595	2.65	0.04	1.03	359	2.64	0.05	1.02	481	2.44	0.05	1.01	1
T97	451	2.97	0.04	0.95	621	2.79	0.04	0.99	366	2.79	0.05	0.98	501	2.72	0.04	0.98	0
T98	449	3.30	0.04	0.88	614	3.27	0.04	0.90	370	3.30	0.05	0.91	512	3.25	0.04	0.89	0
T99	410	3.04	0.05	0.93	565	2.91	0.04	0.96	341	2.93	0.05	0.96	461	2.66	0.05	1.05	0

Importance Ratings by Subgroups Based on Experience Performing Medical Examinations Rule 10

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been performing physical examinations for CMV drivers?

	1-5				6-11				12-17				18 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T100	401	2.87	0.05	0.98	539	2.71	0.04	1.03	328	2.71	0.06	1.01	429	2.51	0.05	1.03	0
T101	489	3.45	0.03	0.77	639	3.41	0.03	0.85	387	3.37	0.04	0.82	517	3.25	0.04	0.89	0
T102	494	3.41	0.03	0.77	649	3.42	0.03	0.79	392	3.46	0.04	0.74	525	3.46	0.03	0.72	0
T103	462	3.56	0.03	0.74	631	3.58	0.03	0.72	383	3.60	0.04	0.74	509	3.51	0.03	0.78	0
T104	444	3.57	0.03	0.71	604	3.57	0.03	0.72	373	3.60	0.04	0.73	501	3.60	0.03	0.69	0
T105	387	3.22	0.04	0.87	509	3.28	0.04	0.88	327	3.28	0.05	0.94	456	3.23	0.04	0.94	0
T106	333	3.10	0.05	0.96	426	3.19	0.05	0.93	290	3.20	0.06	0.94	401	3.15	0.05	0.96	0
T107	383	3.57	0.04	0.72	528	3.54	0.03	0.77	336	3.53	0.04	0.75	484	3.54	0.03	0.75	0
T108	383	3.57	0.04	0.72	524	3.55	0.03	0.75	336	3.56	0.04	0.71	479	3.55	0.03	0.74	0
T109	525	3.57	0.03	0.66	680	3.61	0.02	0.65	406	3.59	0.03	0.66	539	3.53	0.03	0.73	0
T110	527	3.55	0.03	0.68	681	3.56	0.03	0.69	406	3.51	0.04	0.75	539	3.46	0.03	0.75	0
T111	522	3.43	0.03	0.75	668	3.44	0.03	0.77	400	3.41	0.04	0.77	529	3.32	0.04	0.85	0
T112	453	3.17	0.04	0.89	606	3.16	0.04	0.90	374	3.07	0.05	0.94	497	3.08	0.04	0.93	0
T113	431	3.17	0.04	0.89	595	3.07	0.04	0.93	359	3.03	0.05	0.91	475	2.98	0.04	0.96	0
T114	470	3.36	0.04	0.79	634	3.36	0.03	0.80	381	3.23	0.05	0.88	511	3.25	0.04	0.81	0
T115	502	3.53	0.03	0.70	651	3.52	0.03	0.74	387	3.51	0.04	0.72	510	3.47	0.03	0.74	0
T116	436	3.59	0.03	0.69	581	3.65	0.03	0.60	359	3.65	0.03	0.65	486	3.63	0.03	0.64	0
T117	413	3.42	0.04	0.80	555	3.46	0.03	0.76	339	3.46	0.04	0.79	469	3.38	0.04	0.81	0
T118	438	3.63	0.03	0.67	579	3.63	0.03	0.64	358	3.64	0.03	0.64	482	3.67	0.03	0.61	0
T119	384	3.35	0.04	0.88	532	3.39	0.04	0.84	331	3.37	0.05	0.88	450	3.31	0.04	0.93	0
T120	529	3.71	0.02	0.57	684	3.74	0.02	0.53	403	3.76	0.02	0.50	539	3.73	0.03	0.59	0
T121	478	3.38	0.03	0.76	605	3.33	0.03	0.81	382	3.30	0.04	0.84	501	3.24	0.04	0.91	0
T122	352	3.43	0.04	0.78	495	3.33	0.04	0.85	308	3.38	0.05	0.83	430	3.39	0.04	0.81	0
T123	344	3.52	0.04	0.72	483	3.48	0.04	0.77	302	3.50	0.04	0.77	414	3.56	0.04	0.71	0
T124	439	3.28	0.04	0.84	574	3.27	0.04	0.88	344	3.23	0.05	0.90	457	3.20	0.04	0.95	0
T125	483	3.06	0.04	0.91	623	3.04	0.04	0.89	378	2.98	0.05	0.91	489	2.96	0.04	0.96	0
T126	480	3.13	0.04	0.89	623	3.10	0.04	0.87	381	3.06	0.05	0.91	490	3.01	0.04	0.96	0
T127	473	2.81	0.04	0.97	607	2.79	0.04	0.96	366	2.70	0.05	1.00	475	2.64	0.04	0.97	0
T128	454	2.67	0.05	0.99	581	2.65	0.04	0.98	355	2.58	0.05	0.98	461	2.53	0.05	1.00	0
T129	462	2.86	0.04	0.94	595	2.78	0.04	0.97	360	2.71	0.05	1.02	473	2.71	0.05	0.99	0
T130	474	3.30	0.04	0.85	619	3.28	0.03	0.83	373	3.34	0.04	0.79	491	3.30	0.04	0.82	0
T131	493	3.46	0.04	0.79	639	3.47	0.03	0.75	388	3.51	0.04	0.73	515	3.51	0.03	0.73	0
T132	414	3.19	0.04	0.87	561	3.14	0.04	0.88	350	3.25	0.04	0.82	463	3.20	0.04	0.89	0

Importance Ratings by Subgroups Based on Experience Performing Medical Examinations Rule 10

*The C column shows the count of subgroups with mean importance values below 2.50

For how many years have you been performing physical examinations for CMV drivers?

	1-5				6-11				12-17				18 or more				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T133	483	3.80	0.02	0.51	646	3.73	0.02	0.59	396	3.81	0.02	0.49	532	3.79	0.02	0.54	0
T134	488	3.70	0.03	0.63	642	3.71	0.02	0.63	395	3.77	0.03	0.55	537	3.76	0.02	0.56	0
T135	510	3.76	0.02	0.55	662	3.72	0.02	0.57	403	3.76	0.03	0.52	542	3.77	0.02	0.50	0
T136	504	3.60	0.03	0.65	648	3.54	0.03	0.73	398	3.53	0.04	0.72	535	3.57	0.03	0.72	0
T137	458	3.75	0.03	0.61	615	3.70	0.03	0.66	375	3.67	0.03	0.68	498	3.73	0.03	0.65	0
T138	462	3.81	0.02	0.47	626	3.80	0.02	0.54	384	3.80	0.03	0.52	516	3.84	0.02	0.47	0
T139	471	3.92	0.02	0.33	640	3.92	0.01	0.32	389	3.93	0.02	0.33	522	3.91	0.02	0.37	0
T140	512	3.89	0.02	0.37	666	3.88	0.01	0.38	407	3.90	0.02	0.33	542	3.90	0.01	0.33	0
T141	516	3.86	0.02	0.39	674	3.88	0.01	0.35	406	3.87	0.02	0.35	541	3.88	0.01	0.35	0
T142	530	3.82	0.02	0.47	685	3.84	0.02	0.41	409	3.84	0.02	0.41	549	3.85	0.02	0.42	0
T143	537	3.76	0.02	0.50	682	3.80	0.02	0.44	407	3.77	0.02	0.46	544	3.80	0.02	0.45	0
T144	528	3.80	0.02	0.46	686	3.84	0.02	0.43	409	3.87	0.02	0.37	543	3.83	0.02	0.44	0
T145	542	3.79	0.02	0.46	687	3.85	0.01	0.39	411	3.83	0.02	0.42	540	3.84	0.02	0.41	0
T146	536	3.80	0.02	0.47	684	3.88	0.01	0.37	410	3.85	0.02	0.42	545	3.84	0.02	0.42	0

1: For how many years have you been performing physical examinations f
CMV drivers?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	547	23.8	24.8	24.8
	6-11	694	30.2	31.4	56.2
	12-17	415	18.1	18.8	75.0
	18 or more	552	24.0	25.0	100.0
	Total	2208	96.1	100.0	
Missing	System	89	3.9		
Total		2297	100.0		

APPENDIX Q

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Community Subgroups
(Data for Exclusion Rule 11)

Importance Ratings by Subgroups Based on Community Rule 11

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following best describes the community in which you practice?

	Rural				Suburban				Urban				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	747	3.71	0.02	0.57	784	3.74	0.02	0.54	641	3.72	0.02	0.60	0
T2	751	3.39	0.03	0.85	788	3.44	0.03	0.81	641	3.44	0.03	0.84	0
T3	770	3.67	0.02	0.52	799	3.74	0.02	0.48	653	3.76	0.02	0.46	0
T4	767	3.50	0.02	0.64	797	3.57	0.02	0.61	652	3.59	0.02	0.60	0
T5	765	3.24	0.03	0.77	800	3.34	0.03	0.72	651	3.33	0.03	0.76	0
T6	766	3.67	0.02	0.51	797	3.66	0.02	0.54	649	3.71	0.02	0.50	0
T7	768	3.73	0.02	0.50	795	3.70	0.02	0.53	651	3.76	0.02	0.47	0
T8	765	3.77	0.02	0.49	794	3.76	0.02	0.48	649	3.74	0.02	0.54	0
T9	748	3.68	0.02	0.61	783	3.68	0.02	0.60	633	3.67	0.03	0.65	0
T10	765	3.69	0.02	0.58	801	3.77	0.02	0.47	650	3.81	0.02	0.47	0
T11	764	3.67	0.02	0.59	792	3.68	0.02	0.60	646	3.65	0.02	0.63	0
T12	758	2.97	0.03	0.79	790	2.94	0.03	0.81	637	2.97	0.03	0.86	0
T13	768	3.74	0.02	0.49	796	3.75	0.02	0.50	652	3.78	0.02	0.47	0
T14	767	3.53	0.02	0.62	796	3.55	0.02	0.62	649	3.60	0.02	0.63	0
T15	769	3.86	0.01	0.39	793	3.86	0.01	0.37	649	3.90	0.01	0.31	0
T16	769	3.79	0.02	0.47	799	3.81	0.01	0.42	649	3.87	0.02	0.39	0
T17	764	3.21	0.03	0.75	791	3.23	0.03	0.75	642	3.27	0.03	0.76	0
T18	760	3.35	0.03	0.71	790	3.39	0.02	0.68	644	3.43	0.03	0.69	0
T19	770	3.35	0.03	0.73	797	3.35	0.03	0.72	646	3.41	0.03	0.70	0
T20	768	3.70	0.02	0.56	796	3.72	0.02	0.56	646	3.74	0.02	0.52	0
T21	766	2.83	0.03	0.83	792	2.86	0.03	0.86	644	2.87	0.03	0.86	0
T22	762	2.81	0.03	0.90	783	2.87	0.03	0.91	643	2.95	0.04	0.90	0
T23	763	3.78	0.02	0.47	796	3.78	0.02	0.48	643	3.86	0.02	0.38	0
T24	763	2.83	0.03	0.83	790	2.84	0.03	0.85	639	2.90	0.03	0.86	0
T25	769	3.30	0.03	0.76	790	3.40	0.03	0.73	652	3.46	0.03	0.67	0
T26	759	3.15	0.03	0.84	789	3.22	0.03	0.83	638	3.20	0.03	0.82	0
T27	761	3.81	0.02	0.48	792	3.82	0.02	0.46	646	3.84	0.02	0.43	0
T28	769	3.88	0.01	0.37	797	3.91	0.01	0.31	651	3.93	0.01	0.26	0
T29	766	3.47	0.03	0.70	795	3.58	0.02	0.63	648	3.62	0.02	0.63	0
T30	759	3.59	0.02	0.63	792	3.66	0.02	0.58	645	3.70	0.02	0.56	0
T31	742	2.58	0.04	1.01	778	2.69	0.04	1.01	639	2.77	0.04	1.02	0
T32	760	2.87	0.03	0.85	791	2.87	0.03	0.88	649	2.92	0.03	0.89	0
T33	757	3.80	0.02	0.42	785	3.83	0.01	0.40	646	3.88	0.01	0.36	0
T34	753	3.75	0.02	0.51	788	3.77	0.02	0.50	647	3.83	0.02	0.44	0
T35	753	3.55	0.02	0.64	778	3.56	0.02	0.65	643	3.63	0.02	0.61	0
T36	749	3.46	0.03	0.72	773	3.50	0.03	0.70	641	3.52	0.03	0.68	0
T37	750	3.61	0.02	0.66	769	3.65	0.02	0.64	643	3.71	0.02	0.59	0
T38	755	3.35	0.03	0.74	786	3.25	0.03	0.84	644	3.27	0.03	0.84	0
T39	749	3.16	0.03	0.82	777	3.11	0.03	0.86	642	3.14	0.04	0.89	0
T40	749	3.30	0.03	0.77	780	3.24	0.03	0.82	639	3.30	0.03	0.84	0
T41	676	2.82	0.04	0.95	712	2.83	0.04	0.94	595	2.86	0.04	0.99	0
T42	759	2.98	0.03	0.88	793	2.93	0.03	0.91	639	2.92	0.04	0.96	0
T43	751	3.50	0.03	0.71	787	3.52	0.03	0.72	639	3.62	0.03	0.65	0

Importance Ratings by Subgroups Based on Community Rule 11

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following best describes the community in which you practice?

	Rural				Suburban				Urban				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T44	753	3.52	0.03	0.71	778	3.61	0.02	0.64	640	3.68	0.02	0.61	0
T45	759	3.03	0.03	0.89	787	3.03	0.03	0.90	645	3.13	0.03	0.87	0
T46	750	3.25	0.03	0.81	785	3.27	0.03	0.79	642	3.35	0.03	0.76	0
T47	739	2.83	0.03	0.90	775	2.75	0.03	0.93	632	2.75	0.04	0.96	0
T48	751	3.35	0.03	0.79	778	3.44	0.03	0.80	643	3.55	0.03	0.68	0
T49	759	3.59	0.02	0.64	785	3.57	0.02	0.66	642	3.65	0.02	0.59	0
T50	754	3.79	0.02	0.45	783	3.80	0.02	0.44	644	3.84	0.02	0.40	0
T51	749	3.52	0.02	0.67	780	3.53	0.02	0.69	635	3.57	0.03	0.63	0
T52	754	3.32	0.03	0.76	787	3.28	0.03	0.82	642	3.26	0.03	0.80	0
T53	756	3.43	0.03	0.71	788	3.42	0.03	0.74	643	3.44	0.03	0.72	0
T54	741	2.99	0.03	0.92	769	3.00	0.03	0.90	633	3.02	0.04	0.91	0
T55	737	2.71	0.04	0.98	767	2.81	0.04	0.98	630	2.86	0.04	0.97	0
T56	744	2.65	0.04	0.99	782	2.69	0.04	0.98	636	2.76	0.04	0.99	0
T57	749	3.18	0.03	0.85	781	3.16	0.03	0.86	638	3.19	0.03	0.81	0
T58	754	3.42	0.03	0.77	778	3.41	0.03	0.75	636	3.46	0.03	0.71	0
T59	754	3.12	0.03	0.88	776	3.13	0.03	0.84	630	3.15	0.03	0.85	0
T60	741	2.92	0.04	0.97	776	2.93	0.03	0.92	630	3.00	0.04	0.92	0
T61	747	2.99	0.03	0.92	786	3.08	0.03	0.90	641	3.15	0.03	0.86	0
T62	753	2.95	0.03	0.90	778	3.01	0.03	0.88	641	3.04	0.03	0.86	0
T63	755	3.31	0.03	0.81	780	3.34	0.03	0.79	636	3.41	0.03	0.74	0
T64	744	2.90	0.03	0.90	778	2.92	0.03	0.90	639	2.89	0.04	0.91	0
T65	757	3.30	0.03	0.78	788	3.35	0.03	0.79	644	3.43	0.03	0.72	0
T66	757	3.51	0.03	0.71	779	3.59	0.02	0.65	643	3.68	0.02	0.58	0
T67	753	3.52	0.03	0.70	783	3.56	0.02	0.65	637	3.66	0.02	0.56	0
T68	749	3.36	0.03	0.77	779	3.41	0.03	0.73	635	3.45	0.03	0.71	0
T69	749	3.52	0.03	0.70	784	3.59	0.02	0.65	638	3.59	0.03	0.68	0
T70	757	2.95	0.03	0.88	792	2.96	0.03	0.89	647	2.95	0.04	0.90	0
T71	744	3.08	0.03	0.91	783	3.14	0.03	0.89	633	3.15	0.03	0.86	0
T72	760	3.67	0.02	0.59	792	3.69	0.02	0.60	646	3.73	0.02	0.54	0
T73	761	3.26	0.03	0.81	788	3.33	0.03	0.76	646	3.36	0.03	0.78	0
T74	741	3.37	0.03	0.75	780	3.38	0.03	0.77	636	3.38	0.03	0.78	0
T75	764	3.19	0.03	0.82	792	3.27	0.03	0.78	646	3.27	0.03	0.80	0
T76	750	3.14	0.03	0.86	782	3.24	0.03	0.81	644	3.21	0.03	0.85	0
T77	759	3.23	0.03	0.84	792	3.23	0.03	0.86	638	3.18	0.04	0.90	0
T78	759	3.46	0.03	0.80	778	3.51	0.03	0.75	637	3.59	0.03	0.67	0
T79	764	3.53	0.03	0.71	795	3.56	0.02	0.66	647	3.54	0.03	0.68	0
T80	760	3.55	0.03	0.70	783	3.56	0.02	0.66	642	3.58	0.03	0.67	0
T81	758	3.45	0.03	0.74	783	3.49	0.03	0.73	645	3.53	0.03	0.71	0
T82	692	3.26	0.03	0.85	760	3.36	0.03	0.77	626	3.44	0.03	0.79	0
T83	701	3.47	0.03	0.78	747	3.58	0.02	0.67	626	3.64	0.03	0.67	0
T84	662	3.03	0.04	0.93	720	3.03	0.03	0.93	577	3.02	0.04	0.95	0
T85	645	2.69	0.04	1.00	682	2.74	0.04	0.97	551	2.71	0.04	1.01	0
T86	649	2.81	0.04	0.96	688	2.85	0.04	0.95	553	2.84	0.04	0.98	0
T87	638	3.15	0.04	0.96	696	3.27	0.03	0.86	582	3.43	0.03	0.83	0

Importance Ratings by Subgroups Based on Community Rule 11

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following best describes the community in which you practice?

	Rural				Suburban				Urban				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T88	603	2.92	0.04	0.97	638	2.94	0.04	0.97	506	2.91	0.04	1.00	0
T89	545	2.66	0.04	1.00	563	2.67	0.04	0.98	458	2.75	0.05	1.00	0
T90	765	3.80	0.02	0.46	794	3.83	0.02	0.44	649	3.87	0.01	0.38	0
T91	648	3.53	0.03	0.69	717	3.59	0.02	0.66	587	3.65	0.02	0.59	0
T92	723	3.03	0.03	0.88	760	3.08	0.03	0.88	624	3.10	0.04	0.90	0
T93	701	3.31	0.03	0.83	765	3.39	0.03	0.77	629	3.50	0.03	0.72	0
T94	701	3.39	0.03	0.81	764	3.54	0.02	0.69	625	3.61	0.03	0.68	0
T95	665	2.88	0.04	0.93	721	2.91	0.04	0.96	576	2.90	0.04	1.00	0
T96	647	2.64	0.04	1.01	693	2.63	0.04	1.02	551	2.65	0.04	1.03	0
T97	660	2.80	0.04	0.95	721	2.83	0.04	0.98	576	2.82	0.04	1.01	0
T98	654	3.14	0.04	0.93	712	3.27	0.03	0.91	597	3.41	0.03	0.83	0
T99	611	2.86	0.04	0.97	667	2.89	0.04	0.98	518	2.89	0.04	1.01	0
T100	585	2.68	0.04	1.02	638	2.66	0.04	1.02	495	2.78	0.05	1.03	0
T101	688	3.27	0.03	0.89	753	3.41	0.03	0.80	611	3.41	0.03	0.84	0
T102	700	3.29	0.03	0.84	759	3.47	0.03	0.72	623	3.55	0.03	0.68	0
T103	680	3.44	0.03	0.82	731	3.60	0.03	0.70	593	3.65	0.03	0.69	0
T104	661	3.45	0.03	0.80	709	3.62	0.03	0.68	573	3.67	0.03	0.66	0
T105	535	3.11	0.04	0.96	629	3.26	0.04	0.89	535	3.36	0.04	0.86	0
T106	450	2.96	0.05	1.02	548	3.17	0.04	0.93	468	3.31	0.04	0.88	0
T107	563	3.46	0.03	0.81	649	3.54	0.03	0.73	539	3.63	0.03	0.72	0
T108	563	3.48	0.03	0.79	644	3.55	0.03	0.71	534	3.64	0.03	0.71	0
T109	752	3.57	0.02	0.68	775	3.57	0.02	0.69	645	3.58	0.03	0.67	0
T110	757	3.48	0.03	0.74	777	3.53	0.03	0.71	642	3.56	0.03	0.72	0
T111	743	3.38	0.03	0.78	774	3.39	0.03	0.80	625	3.43	0.03	0.79	0
T112	661	3.13	0.04	0.92	726	3.11	0.03	0.91	563	3.14	0.04	0.93	0
T113	636	3.04	0.04	0.92	699	3.06	0.03	0.92	548	3.09	0.04	0.96	0
T114	684	3.33	0.03	0.78	738	3.28	0.03	0.83	596	3.31	0.03	0.85	0
T115	715	3.54	0.03	0.68	746	3.47	0.03	0.76	609	3.52	0.03	0.74	0
T116	668	3.60	0.02	0.65	680	3.62	0.03	0.67	537	3.66	0.03	0.63	0
T117	627	3.41	0.03	0.79	656	3.39	0.03	0.82	515	3.50	0.03	0.76	0
T118	661	3.63	0.02	0.64	681	3.63	0.03	0.65	539	3.66	0.03	0.64	0
T119	593	3.30	0.04	0.92	630	3.32	0.04	0.88	493	3.47	0.04	0.81	0
T120	752	3.67	0.02	0.60	779	3.73	0.02	0.55	646	3.79	0.02	0.49	0
T121	680	3.27	0.03	0.85	726	3.32	0.03	0.82	579	3.35	0.03	0.82	0
T122	527	3.31	0.04	0.87	593	3.40	0.03	0.80	481	3.42	0.04	0.78	0
T123	509	3.49	0.03	0.74	583	3.51	0.03	0.75	469	3.54	0.03	0.75	0
T124	630	3.28	0.03	0.88	670	3.24	0.03	0.90	531	3.22	0.04	0.92	0
T125	699	2.98	0.03	0.91	714	3.01	0.03	0.92	577	3.06	0.04	0.93	0
T126	690	3.06	0.03	0.90	724	3.06	0.03	0.91	577	3.12	0.04	0.92	0
T127	673	2.78	0.04	0.94	702	2.72	0.04	0.99	562	2.74	0.04	1.00	0
T128	649	2.62	0.04	0.97	683	2.60	0.04	0.99	536	2.63	0.04	1.02	0
T129	665	2.73	0.04	0.99	703	2.78	0.04	0.96	537	2.82	0.04	0.99	0
T130	661	3.21	0.03	0.86	728	3.30	0.03	0.79	582	3.41	0.03	0.81	0
T131	690	3.37	0.03	0.84	757	3.49	0.03	0.72	607	3.60	0.03	0.69	0

Importance Ratings by Subgroups Based on Community Rule 11

*The C column shows the count of subgroups with mean importance values below 2.50

Which of the following best describes the community in which you practice?

	Rural				Suburban				Urban				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T132	574	3.10	0.04	0.91	679	3.17	0.03	0.87	553	3.30	0.04	0.82	0
T133	700	3.72	0.02	0.58	754	3.75	0.02	0.58	621	3.84	0.02	0.46	0
T134	703	3.67	0.02	0.63	757	3.71	0.02	0.63	619	3.79	0.02	0.55	0
T135	729	3.67	0.02	0.60	769	3.76	0.02	0.51	636	3.80	0.02	0.50	0
T136	719	3.48	0.03	0.76	755	3.56	0.03	0.69	628	3.64	0.03	0.65	0
T137	652	3.67	0.03	0.68	727	3.70	0.02	0.66	584	3.77	0.02	0.59	0
T138	675	3.77	0.02	0.54	737	3.82	0.02	0.50	591	3.85	0.02	0.45	0
T139	683	3.91	0.01	0.35	752	3.91	0.01	0.37	603	3.93	0.01	0.29	0
T140	736	3.83	0.02	0.42	775	3.92	0.01	0.33	634	3.91	0.01	0.30	0
T141	745	3.84	0.01	0.40	778	3.88	0.01	0.36	630	3.90	0.01	0.31	0
T142	759	3.82	0.02	0.43	788	3.82	0.02	0.47	643	3.88	0.01	0.37	0
T143	760	3.75	0.02	0.48	790	3.77	0.02	0.50	638	3.82	0.02	0.44	0
T144	757	3.80	0.02	0.48	785	3.81	0.02	0.45	642	3.88	0.01	0.38	0
T145	764	3.79	0.02	0.45	790	3.82	0.02	0.44	645	3.87	0.01	0.37	0
T146	763	3.81	0.02	0.47	791	3.84	0.01	0.42	642	3.87	0.02	0.38	0

Q12: Which of the following best describes the community in which you practice?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	773	33.7	34.6	34.6
	Suburban	805	35.0	36.1	70.7
	Urban	654	28.5	29.3	100.0
	Total	2232	97.2	100.0	
Missing	System	65	2.8		
Total		2297	100.0		

APPENDIX R

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Age Subgroups
(Data for Exclusion Rule 12)

Importance Ratings by Subgroups Based on Age Rule 12

*The C column shows the count of subgroups with mean importance values below 2.50

What was the year of your birth?

	1950 or earlier				1951-1955				1956-1963				1964 or later				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	543	3.76	0.02	0.52	522	3.75	0.02	0.56	565	3.74	0.02	0.57	498	3.65	0.03	0.61	0
T2	542	3.45	0.04	0.82	525	3.42	0.04	0.84	570	3.48	0.03	0.79	499	3.37	0.04	0.86	0
T3	552	3.73	0.02	0.49	531	3.72	0.02	0.48	583	3.73	0.02	0.48	512	3.71	0.02	0.51	0
T4	551	3.54	0.03	0.61	531	3.54	0.03	0.63	581	3.58	0.02	0.60	508	3.55	0.03	0.64	0
T5	549	3.26	0.03	0.76	530	3.31	0.03	0.75	584	3.33	0.03	0.75	507	3.32	0.03	0.72	0
T6	549	3.70	0.02	0.50	529	3.72	0.02	0.48	582	3.70	0.02	0.50	508	3.61	0.03	0.58	0
T7	549	3.73	0.02	0.50	530	3.73	0.02	0.49	582	3.75	0.02	0.49	509	3.69	0.02	0.52	0
T8	548	3.75	0.02	0.52	529	3.76	0.02	0.49	581	3.78	0.02	0.48	509	3.74	0.02	0.53	0
T9	535	3.70	0.03	0.61	522	3.70	0.03	0.59	571	3.68	0.03	0.62	493	3.61	0.03	0.66	0
T10	548	3.77	0.02	0.50	530	3.72	0.02	0.55	580	3.78	0.02	0.49	513	3.74	0.02	0.51	0
T11	546	3.70	0.02	0.58	530	3.70	0.03	0.58	577	3.68	0.02	0.59	507	3.60	0.03	0.66	0
T12	548	3.04	0.03	0.81	523	2.97	0.04	0.81	570	2.98	0.03	0.80	501	2.87	0.04	0.85	0
T13	550	3.81	0.02	0.42	531	3.77	0.02	0.48	579	3.75	0.02	0.48	513	3.71	0.02	0.54	0
T14	548	3.59	0.03	0.61	531	3.58	0.03	0.62	579	3.58	0.03	0.60	511	3.48	0.03	0.67	0
T15	544	3.90	0.01	0.32	533	3.86	0.02	0.38	580	3.88	0.01	0.34	510	3.85	0.02	0.40	0
T16	550	3.86	0.02	0.36	532	3.78	0.02	0.47	582	3.85	0.02	0.42	509	3.79	0.02	0.47	0
T17	545	3.29	0.03	0.69	525	3.26	0.03	0.72	578	3.29	0.03	0.76	506	3.12	0.04	0.81	0
T18	544	3.33	0.03	0.71	529	3.38	0.03	0.69	576	3.46	0.03	0.67	501	3.37	0.03	0.70	0
T19	550	3.33	0.03	0.72	530	3.38	0.03	0.67	579	3.41	0.03	0.74	510	3.35	0.03	0.71	0
T20	546	3.74	0.02	0.52	530	3.72	0.02	0.56	580	3.77	0.02	0.50	510	3.65	0.03	0.61	0
T21	545	2.84	0.04	0.84	529	2.88	0.04	0.82	576	2.93	0.03	0.83	509	2.75	0.04	0.89	0
T22	543	2.86	0.04	0.90	527	2.92	0.04	0.89	576	2.94	0.04	0.88	504	2.76	0.04	0.93	0
T23	543	3.82	0.02	0.42	529	3.80	0.02	0.48	580	3.80	0.02	0.44	509	3.78	0.02	0.47	0
T24	539	2.82	0.04	0.84	529	2.88	0.04	0.84	575	2.90	0.04	0.84	506	2.79	0.04	0.86	0
T25	547	3.35	0.03	0.76	529	3.37	0.03	0.71	581	3.41	0.03	0.70	509	3.38	0.03	0.74	0
T26	541	3.23	0.03	0.81	528	3.21	0.03	0.80	573	3.21	0.04	0.85	499	3.08	0.04	0.86	0
T27	543	3.86	0.02	0.43	527	3.85	0.02	0.41	579	3.84	0.02	0.43	505	3.75	0.02	0.56	0
T28	549	3.92	0.01	0.29	530	3.92	0.01	0.29	583	3.91	0.01	0.31	510	3.88	0.02	0.36	0
T29	544	3.61	0.03	0.62	527	3.61	0.03	0.58	583	3.57	0.03	0.64	510	3.42	0.03	0.76	0
T30	545	3.66	0.02	0.57	523	3.68	0.02	0.55	579	3.70	0.02	0.56	504	3.55	0.03	0.68	0
T31	541	2.74	0.04	1.02	514	2.65	0.04	0.99	566	2.74	0.04	1.00	494	2.57	0.05	1.02	0
T32	548	2.93	0.04	0.85	527	2.91	0.04	0.87	575	2.87	0.04	0.89	505	2.82	0.04	0.87	0
T33	547	3.84	0.02	0.39	523	3.84	0.02	0.40	573	3.85	0.02	0.37	505	3.82	0.02	0.40	0

Importance Ratings by Subgroups Based on Age Rule 12

*The C column shows the count of subgroups with mean importance values below 2.50

What was the year of your birth?

	1950 or earlier				1951-1955				1956-1963				1964 or later				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T34	546	3.77	0.02	0.52	522	3.78	0.02	0.49	570	3.82	0.02	0.44	507	3.76	0.02	0.49	0
T35	543	3.60	0.03	0.62	518	3.56	0.03	0.66	569	3.60	0.03	0.61	500	3.57	0.03	0.63	0
T36	542	3.48	0.03	0.71	517	3.50	0.03	0.71	565	3.48	0.03	0.72	499	3.53	0.03	0.65	0
T37	545	3.68	0.03	0.59	518	3.67	0.03	0.61	562	3.64	0.03	0.66	497	3.64	0.03	0.64	0
T38	545	3.24	0.04	0.83	525	3.29	0.03	0.80	569	3.27	0.04	0.84	505	3.36	0.03	0.76	0
T39	546	3.14	0.04	0.85	520	3.14	0.04	0.84	565	3.14	0.04	0.88	498	3.14	0.04	0.84	0
T40	538	3.22	0.04	0.84	521	3.32	0.03	0.78	562	3.30	0.03	0.80	505	3.29	0.04	0.80	0
T41	490	2.84	0.04	0.95	487	2.87	0.04	0.92	521	2.86	0.04	0.99	449	2.72	0.05	0.98	0
T42	545	2.92	0.04	0.92	524	2.96	0.04	0.89	573	2.94	0.04	0.95	507	2.93	0.04	0.90	0
T43	542	3.58	0.03	0.62	521	3.55	0.03	0.71	568	3.54	0.03	0.72	504	3.51	0.03	0.72	0
T44	537	3.66	0.03	0.62	519	3.57	0.03	0.66	571	3.62	0.03	0.65	504	3.55	0.03	0.67	0
T45	544	3.05	0.04	0.92	522	3.05	0.04	0.86	576	3.08	0.04	0.91	506	3.03	0.04	0.87	0
T46	540	3.31	0.03	0.79	521	3.27	0.03	0.79	578	3.33	0.03	0.79	496	3.24	0.04	0.79	0
T47	529	2.78	0.04	0.92	514	2.75	0.04	0.88	570	2.81	0.04	0.98	489	2.75	0.04	0.93	0
T48	542	3.52	0.03	0.74	523	3.45	0.03	0.78	572	3.45	0.03	0.77	492	3.33	0.03	0.77	0
T49	542	3.55	0.03	0.66	521	3.59	0.03	0.65	575	3.63	0.02	0.60	507	3.61	0.03	0.60	0
T50	542	3.82	0.02	0.43	521	3.80	0.02	0.45	575	3.81	0.02	0.43	504	3.81	0.02	0.43	0
T51	535	3.55	0.03	0.69	520	3.53	0.03	0.67	564	3.57	0.03	0.64	505	3.50	0.03	0.67	0
T52	541	3.24	0.04	0.82	519	3.29	0.03	0.78	576	3.30	0.03	0.79	503	3.31	0.04	0.79	0
T53	542	3.37	0.03	0.76	522	3.42	0.03	0.72	576	3.45	0.03	0.70	506	3.44	0.03	0.71	0
T54	537	2.95	0.04	0.91	512	3.01	0.04	0.91	559	3.03	0.04	0.90	497	2.99	0.04	0.92	0
T55	531	2.79	0.04	1.01	510	2.83	0.04	0.94	562	2.82	0.04	0.98	491	2.71	0.04	0.97	0
T56	534	2.63	0.04	1.00	520	2.71	0.04	0.95	568	2.73	0.04	1.02	498	2.67	0.04	0.95	0
T57	541	3.20	0.04	0.84	517	3.20	0.04	0.80	569	3.19	0.04	0.84	500	3.10	0.04	0.88	0
T58	538	3.46	0.03	0.73	516	3.44	0.03	0.72	572	3.42	0.03	0.76	503	3.38	0.03	0.78	0
T59	535	3.08	0.04	0.87	515	3.13	0.04	0.83	566	3.14	0.04	0.88	504	3.17	0.04	0.85	0
T60	536	2.95	0.04	0.92	512	2.94	0.04	0.92	565	2.97	0.04	0.95	498	2.92	0.04	0.97	0
T61	540	3.04	0.04	0.91	519	3.07	0.04	0.88	575	3.14	0.04	0.87	499	3.02	0.04	0.90	0
T62	540	2.95	0.04	0.91	518	3.00	0.04	0.86	572	3.08	0.04	0.87	499	2.95	0.04	0.88	0
T63	539	3.35	0.04	0.82	518	3.34	0.03	0.76	572	3.37	0.03	0.76	504	3.33	0.04	0.79	0
T64	536	2.87	0.04	0.89	517	2.88	0.04	0.91	568	2.94	0.04	0.91	502	2.89	0.04	0.91	0
T65	544	3.32	0.03	0.78	525	3.37	0.03	0.77	578	3.40	0.03	0.74	500	3.33	0.03	0.78	0
T66	541	3.60	0.03	0.64	520	3.60	0.03	0.66	574	3.61	0.03	0.62	501	3.57	0.03	0.68	0

Importance Ratings by Subgroups Based on Age Rule 12

*The C column shows the count of subgroups with mean importance values below 2.50

What was the year of your birth?

	1950 or earlier				1951-1955				1956-1963				1964 or later				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T67	539	3.57	0.03	0.67	523	3.60	0.03	0.63	570	3.61	0.03	0.62	499	3.54	0.03	0.65	0
T68	539	3.35	0.03	0.76	514	3.40	0.03	0.74	571	3.46	0.03	0.70	496	3.37	0.03	0.76	0
T69	540	3.54	0.03	0.72	514	3.59	0.03	0.66	571	3.58	0.03	0.66	503	3.53	0.03	0.68	0
T70	548	2.94	0.04	0.91	526	2.94	0.04	0.87	574	3.00	0.04	0.90	509	2.92	0.04	0.87	0
T71	538	3.14	0.04	0.88	515	3.10	0.04	0.88	564	3.16	0.04	0.89	501	3.10	0.04	0.89	0
T72	545	3.73	0.02	0.56	525	3.72	0.02	0.57	578	3.71	0.02	0.52	507	3.60	0.03	0.66	0
T73	549	3.26	0.03	0.79	523	3.35	0.03	0.72	579	3.37	0.03	0.77	504	3.28	0.04	0.83	0
T74	537	3.39	0.03	0.74	514	3.38	0.03	0.77	571	3.42	0.03	0.76	494	3.31	0.04	0.80	0
T75	548	3.20	0.03	0.81	524	3.26	0.03	0.78	581	3.27	0.03	0.81	508	3.21	0.04	0.80	0
T76	542	3.21	0.04	0.84	520	3.18	0.04	0.84	573	3.24	0.03	0.82	496	3.14	0.04	0.87	0
T77	544	3.20	0.04	0.89	524	3.22	0.04	0.88	576	3.23	0.03	0.83	503	3.19	0.04	0.87	0
T78	540	3.54	0.03	0.72	517	3.49	0.03	0.75	573	3.52	0.03	0.76	501	3.51	0.04	0.78	0
T79	547	3.52	0.03	0.69	527	3.59	0.03	0.66	578	3.56	0.03	0.67	509	3.49	0.03	0.71	0
T80	540	3.57	0.03	0.67	518	3.62	0.03	0.62	576	3.59	0.03	0.64	506	3.46	0.03	0.77	0
T81	543	3.53	0.03	0.73	521	3.54	0.03	0.64	578	3.51	0.03	0.72	502	3.37	0.04	0.81	0
T82	522	3.36	0.03	0.79	500	3.34	0.04	0.82	552	3.38	0.03	0.79	469	3.33	0.04	0.81	0
T83	517	3.55	0.03	0.73	500	3.56	0.03	0.72	547	3.63	0.03	0.64	469	3.53	0.03	0.74	0
T84	495	2.95	0.04	0.95	469	3.02	0.04	0.90	526	3.10	0.04	0.92	433	3.05	0.05	0.95	0
T85	476	2.63	0.05	1.01	451	2.76	0.05	0.96	496	2.75	0.05	1.02	415	2.76	0.05	0.97	0
T86	478	2.77	0.04	0.97	457	2.89	0.04	0.90	500	2.83	0.04	1.00	414	2.88	0.05	0.97	0
T87	485	3.23	0.04	0.92	459	3.31	0.04	0.87	512	3.35	0.04	0.85	421	3.21	0.04	0.91	0
T88	440	2.84	0.05	1.03	424	2.90	0.05	0.98	464	2.95	0.05	0.97	384	3.05	0.05	0.90	0
T89	395	2.55	0.05	1.02	375	2.71	0.05	0.98	420	2.79	0.05	0.99	349	2.73	0.05	0.96	0
T90	545	3.84	0.02	0.42	527	3.83	0.02	0.43	580	3.84	0.02	0.42	511	3.81	0.02	0.45	0
T91	490	3.61	0.03	0.62	471	3.60	0.03	0.68	524	3.60	0.03	0.65	430	3.56	0.03	0.67	0
T92	524	2.96	0.04	0.93	501	3.10	0.04	0.86	559	3.11	0.04	0.87	484	3.09	0.04	0.89	0
T93	523	3.42	0.03	0.75	509	3.36	0.04	0.81	553	3.39	0.03	0.81	473	3.41	0.03	0.73	0
T94	517	3.51	0.03	0.75	501	3.50	0.03	0.74	552	3.57	0.03	0.68	477	3.47	0.03	0.75	0
T95	487	2.81	0.05	1.00	468	2.88	0.04	0.93	529	2.93	0.04	0.96	442	3.00	0.05	0.95	0
T96	472	2.57	0.05	1.02	455	2.62	0.05	0.99	507	2.63	0.05	1.06	423	2.79	0.05	0.98	0
T97	494	2.77	0.04	0.98	467	2.79	0.05	0.98	523	2.83	0.04	0.98	436	2.90	0.05	0.97	0
T98	492	3.22	0.04	0.94	471	3.28	0.04	0.89	526	3.32	0.04	0.89	434	3.26	0.04	0.88	0
T99	442	2.82	0.05	1.04	427	2.84	0.05	1.00	490	2.87	0.04	0.98	404	3.04	0.05	0.91	0

Importance Ratings by Subgroups Based on Age Rule 12

*The C column shows the count of subgroups with mean importance values below 2.50

What was the year of your birth?

	1950 or earlier				1951-1955				1956-1963				1964 or later				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T100	415	2.57	0.05	1.07	407	2.65	0.05	1.00	470	2.73	0.05	1.00	393	2.88	0.05	1.00	0
T101	509	3.30	0.04	0.87	485	3.36	0.04	0.86	550	3.40	0.03	0.80	471	3.42	0.04	0.79	0
T102	521	3.45	0.03	0.75	497	3.45	0.03	0.75	548	3.46	0.03	0.75	480	3.39	0.04	0.77	0
T103	500	3.55	0.03	0.78	484	3.55	0.03	0.73	531	3.57	0.03	0.75	453	3.55	0.03	0.72	0
T104	488	3.59	0.03	0.72	464	3.59	0.03	0.68	517	3.59	0.03	0.73	440	3.54	0.03	0.72	0
T105	432	3.24	0.04	0.93	416	3.25	0.04	0.91	455	3.28	0.04	0.90	368	3.22	0.05	0.86	0
T106	382	3.15	0.05	0.97	351	3.22	0.05	0.91	397	3.17	0.05	0.95	315	3.10	0.05	0.94	0
T107	458	3.56	0.04	0.75	422	3.54	0.04	0.77	465	3.58	0.03	0.73	366	3.50	0.04	0.74	0
T108	458	3.59	0.03	0.73	417	3.56	0.04	0.74	463	3.58	0.03	0.72	365	3.49	0.04	0.74	0
T109	543	3.60	0.03	0.65	517	3.54	0.03	0.71	568	3.58	0.03	0.67	500	3.59	0.03	0.66	0
T110	544	3.54	0.03	0.70	518	3.50	0.03	0.74	567	3.53	0.03	0.74	504	3.54	0.03	0.69	0
T111	532	3.38	0.03	0.80	505	3.41	0.04	0.79	564	3.43	0.03	0.78	498	3.38	0.03	0.75	0
T112	496	3.21	0.04	0.90	472	3.14	0.04	0.88	517	3.11	0.04	0.94	430	3.06	0.04	0.92	0
T113	482	3.14	0.04	0.91	458	3.05	0.04	0.90	488	3.05	0.04	0.95	415	3.03	0.05	0.93	0
T114	514	3.29	0.04	0.85	483	3.31	0.04	0.80	530	3.35	0.03	0.78	453	3.29	0.04	0.83	0
T115	513	3.54	0.03	0.71	495	3.49	0.03	0.74	544	3.49	0.03	0.74	478	3.52	0.03	0.68	0
T116	483	3.64	0.03	0.65	451	3.63	0.03	0.66	492	3.65	0.03	0.62	423	3.58	0.03	0.64	0
T117	466	3.43	0.04	0.81	432	3.41	0.04	0.82	470	3.47	0.03	0.75	394	3.42	0.04	0.75	0
T118	483	3.67	0.03	0.63	451	3.65	0.03	0.62	489	3.63	0.03	0.63	423	3.61	0.03	0.66	0
T119	441	3.35	0.04	0.88	411	3.38	0.04	0.84	455	3.40	0.04	0.86	375	3.27	0.05	0.92	0
T120	544	3.78	0.02	0.47	512	3.72	0.03	0.59	572	3.74	0.02	0.54	506	3.68	0.03	0.59	0
T121	479	3.30	0.04	0.83	484	3.28	0.04	0.88	527	3.36	0.04	0.82	459	3.35	0.04	0.78	0
T122	419	3.43	0.04	0.79	385	3.40	0.04	0.81	422	3.39	0.04	0.83	342	3.30	0.04	0.82	0
T123	411	3.56	0.04	0.72	369	3.54	0.04	0.74	410	3.52	0.04	0.76	341	3.42	0.04	0.75	0
T124	440	3.31	0.04	0.89	443	3.25	0.04	0.92	486	3.28	0.04	0.88	425	3.17	0.04	0.87	0
T125	489	3.00	0.04	0.95	474	3.04	0.04	0.89	527	3.06	0.04	0.90	462	2.98	0.04	0.91	0
T126	489	3.04	0.04	0.95	475	3.16	0.04	0.86	524	3.10	0.04	0.89	466	3.04	0.04	0.90	0
T127	474	2.70	0.04	0.97	453	2.79	0.04	0.94	517	2.79	0.04	0.97	461	2.73	0.05	1.00	0
T128	455	2.62	0.05	1.00	444	2.66	0.04	0.94	500	2.66	0.04	0.98	436	2.57	0.05	1.00	0
T129	464	2.78	0.05	1.00	457	2.81	0.04	0.94	506	2.80	0.04	0.99	446	2.73	0.05	0.97	0
T130	487	3.31	0.04	0.83	473	3.28	0.04	0.80	524	3.38	0.03	0.79	449	3.23	0.04	0.87	0
T131	509	3.52	0.03	0.75	488	3.51	0.03	0.72	541	3.54	0.03	0.71	476	3.37	0.04	0.82	0
T132	453	3.21	0.04	0.89	433	3.14	0.04	0.90	480	3.23	0.04	0.85	405	3.16	0.04	0.84	0

Importance Ratings by Subgroups Based on Age Rule 12

*The C column shows the count of subgroups with mean importance values below 2.50

What was the year of your birth?

	1950 or earlier				1951-1955				1956-1963				1964 or later				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T133	525	3.80	0.02	0.52	496	3.76	0.03	0.58	542	3.78	0.02	0.53	472	3.75	0.03	0.56	0
T134	527	3.77	0.02	0.53	499	3.72	0.03	0.62	542	3.73	0.03	0.60	477	3.68	0.03	0.64	0
T135	535	3.77	0.02	0.49	511	3.75	0.02	0.55	558	3.75	0.02	0.54	490	3.72	0.03	0.56	0
T136	530	3.60	0.03	0.68	503	3.54	0.03	0.71	549	3.57	0.03	0.73	481	3.52	0.03	0.72	0
T137	493	3.70	0.03	0.66	466	3.68	0.03	0.66	523	3.72	0.03	0.67	442	3.77	0.03	0.54	0
T138	505	3.83	0.02	0.46	476	3.82	0.02	0.47	533	3.80	0.02	0.57	452	3.81	0.02	0.47	0
T139	513	3.92	0.01	0.30	488	3.91	0.02	0.35	537	3.91	0.02	0.37	460	3.92	0.01	0.30	0
T140	535	3.90	0.01	0.31	511	3.88	0.02	0.38	567	3.90	0.01	0.34	491	3.87	0.02	0.39	0
T141	542	3.89	0.01	0.34	508	3.89	0.01	0.33	565	3.87	0.02	0.37	499	3.87	0.02	0.36	0
T142	546	3.85	0.02	0.38	521	3.83	0.02	0.47	576	3.85	0.02	0.40	505	3.83	0.02	0.43	0
T143	547	3.78	0.02	0.47	521	3.80	0.02	0.48	572	3.81	0.02	0.43	508	3.76	0.02	0.48	0
T144	545	3.84	0.02	0.42	521	3.83	0.02	0.45	569	3.84	0.02	0.42	506	3.80	0.02	0.46	0
T145	547	3.86	0.02	0.38	519	3.83	0.02	0.42	577	3.83	0.02	0.43	513	3.79	0.02	0.44	0
T146	546	3.87	0.02	0.38	522	3.85	0.02	0.41	579	3.85	0.02	0.42	512	3.81	0.02	0.46	0

Q15: What was the year of your birth?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1950 or earlier	553	24.1	25.3	25.3
	1951-1955	533	23.2	24.4	49.7
	1956-1963	585	25.5	26.8	76.4
	1964 or later	515	22.4	23.6	100.0
	Total	2186	95.2	100.0	
Missing	System	111	4.8		
Total		2297	100.0		

APPENDIX S

Importance Analysis for Population Subgroups
Task Mean Importance Ratings for
Gender Subgroups
(Data for Exclusion Rule 13)

Importance Ratings by Subgroups Based on Gender Rule 13

*The C column shows the count of subgroups with mean importance values below 2.50

What is your gender?

	Female				Male				
Task	**N**	**Mean**	**SEM**	**SD**	**N**	**Mean**	**SEM**	**SD**	**C***
T1	739	3.69	0.02	0.58	1328	3.75	0.02	0.56	0
T2	751	3.39	0.03	0.85	1324	3.45	0.02	0.82	0
T3	768	3.77	0.02	0.46	1347	3.70	0.01	0.50	0
T4	766	3.62	0.02	0.58	1343	3.51	0.02	0.64	0
T5	766	3.35	0.03	0.73	1344	3.28	0.02	0.76	0
T6	767	3.72	0.02	0.50	1340	3.66	0.01	0.53	0
T7	766	3.76	0.02	0.47	1343	3.71	0.01	0.52	0
T8	764	3.76	0.02	0.52	1341	3.75	0.01	0.50	0
T9	742	3.69	0.02	0.60	1321	3.66	0.02	0.63	0
T10	768	3.80	0.02	0.45	1341	3.72	0.01	0.55	0
T11	762	3.74	0.02	0.53	1337	3.63	0.02	0.64	0
T12	756	2.97	0.03	0.79	1326	2.95	0.02	0.83	0
T13	767	3.78	0.02	0.47	1344	3.74	0.01	0.50	0
T14	764	3.61	0.02	0.58	1343	3.53	0.02	0.65	0
T15	765	3.91	0.01	0.30	1342	3.85	0.01	0.38	0
T16	767	3.83	0.02	0.42	1344	3.81	0.01	0.44	0
T17	762	3.29	0.03	0.74	1335	3.22	0.02	0.75	0
T18	759	3.50	0.02	0.64	1331	3.33	0.02	0.72	0
T19	765	3.45	0.02	0.66	1343	3.33	0.02	0.73	0
T20	765	3.77	0.02	0.49	1342	3.69	0.02	0.58	0
T21	764	2.91	0.03	0.79	1333	2.82	0.02	0.87	0
T22	762	2.96	0.03	0.82	1330	2.83	0.03	0.94	0
T23	765	3.85	0.01	0.40	1336	3.78	0.01	0.47	0
T24	763	2.93	0.03	0.80	1326	2.82	0.02	0.86	0
T25	765	3.44	0.03	0.70	1342	3.35	0.02	0.74	0
T26	754	3.21	0.03	0.81	1327	3.17	0.02	0.84	0
T27	763	3.86	0.01	0.40	1334	3.80	0.01	0.50	0
T28	768	3.91	0.01	0.32	1344	3.90	0.01	0.32	0
T29	765	3.56	0.02	0.64	1339	3.55	0.02	0.66	0
T30	757	3.73	0.02	0.53	1334	3.60	0.02	0.62	0
T31	744	2.74	0.04	0.99	1309	2.64	0.03	1.02	0
T32	755	2.95	0.03	0.82	1338	2.83	0.02	0.90	0
T33	755	3.86	0.01	0.37	1330	3.82	0.01	0.41	0
T34	752	3.79	0.02	0.48	1332	3.78	0.01	0.49	0
T35	751	3.66	0.02	0.55	1316	3.53	0.02	0.67	0
T36	748	3.59	0.02	0.62	1312	3.44	0.02	0.74	0
T37	740	3.69	0.02	0.60	1320	3.64	0.02	0.64	0
T38	750	3.44	0.03	0.72	1330	3.21	0.02	0.84	0
T39	745	3.21	0.03	0.80	1320	3.10	0.02	0.88	0
T40	752	3.36	0.03	0.74	1315	3.23	0.02	0.84	0
T41	675	2.88	0.04	0.93	1211	2.79	0.03	0.98	0
T42	763	3.04	0.03	0.86	1325	2.88	0.03	0.94	0
T43	751	3.64	0.02	0.62	1322	3.49	0.02	0.74	0

Importance Ratings by Subgroups Based on Gender Rule 13

*The C column shows the count of subgroups with mean importance values below 2.50

What is your gender?

	Female				Male				
T44	751	3.65	0.02	0.59	1318	3.56	0.02	0.69	0
T45	757	3.22	0.03	0.80	1330	2.96	0.03	0.93	0
T46	755	3.44	0.03	0.70	1319	3.19	0.02	0.82	0
T47	739	2.90	0.03	0.86	1303	2.70	0.03	0.95	0
T48	750	3.52	0.02	0.68	1319	3.39	0.02	0.82	0
T49	756	3.74	0.02	0.47	1328	3.52	0.02	0.69	0
T50	753	3.87	0.01	0.36	1327	3.77	0.01	0.47	0
T51	749	3.67	0.02	0.57	1314	3.46	0.02	0.71	0
T52	753	3.46	0.02	0.68	1328	3.18	0.02	0.84	0
T53	755	3.57	0.02	0.60	1328	3.34	0.02	0.77	0
T54	735	3.13	0.03	0.86	1305	2.91	0.03	0.93	0
T55	741	2.85	0.03	0.94	1293	2.75	0.03	0.99	0
T56	748	2.78	0.04	0.96	1311	2.63	0.03	0.99	0
T57	756	3.29	0.03	0.76	1309	3.10	0.02	0.88	0
T58	752	3.56	0.02	0.65	1315	3.34	0.02	0.79	0
T59	745	3.25	0.03	0.78	1311	3.05	0.02	0.90	0
T60	749	3.02	0.03	0.93	1298	2.89	0.03	0.95	0
T61	751	3.15	0.03	0.84	1321	3.02	0.03	0.92	0
T62	754	3.10	0.03	0.82	1317	2.93	0.03	0.91	0
T63	754	3.49	0.02	0.67	1317	3.26	0.02	0.84	0
T64	750	3.01	0.03	0.86	1311	2.84	0.03	0.92	0
T65	757	3.49	0.02	0.66	1328	3.28	0.02	0.81	0
T66	752	3.66	0.02	0.58	1323	3.55	0.02	0.69	0
T67	751	3.64	0.02	0.58	1318	3.54	0.02	0.68	0
T68	745	3.48	0.02	0.67	1315	3.34	0.02	0.77	0
T69	751	3.66	0.02	0.61	1317	3.50	0.02	0.71	0
T70	763	3.07	0.03	0.84	1330	2.88	0.03	0.91	0
T71	749	3.30	0.03	0.81	1309	3.02	0.03	0.92	0
T72	764	3.76	0.02	0.51	1331	3.65	0.02	0.62	0
T73	762	3.43	0.03	0.69	1329	3.25	0.02	0.82	0
T74	743	3.47	0.03	0.73	1311	3.32	0.02	0.78	0
T75	764	3.36	0.03	0.74	1336	3.17	0.02	0.82	0
T76	746	3.29	0.03	0.77	1323	3.13	0.02	0.87	0
T77	755	3.32	0.03	0.79	1330	3.14	0.02	0.90	0
T78	748	3.56	0.03	0.72	1324	3.48	0.02	0.77	0
T79	764	3.69	0.02	0.54	1336	3.45	0.02	0.74	0
T80	762	3.69	0.02	0.55	1316	3.48	0.02	0.73	0
T81	758	3.61	0.02	0.61	1324	3.42	0.02	0.78	0
T82	722	3.48	0.03	0.70	1262	3.29	0.02	0.85	0
T83	720	3.69	0.02	0.62	1254	3.50	0.02	0.75	0
T84	674	3.13	0.03	0.90	1190	2.96	0.03	0.95	0
T85	641	2.88	0.04	0.95	1140	2.64	0.03	1.01	0
T86	655	2.97	0.04	0.93	1139	2.76	0.03	0.98	0
T87	662	3.42	0.03	0.81	1160	3.19	0.03	0.93	0
T88	599	3.03	0.04	0.94	1064	2.88	0.03	1.00	0

Importance Ratings by Subgroups Based on Gender Rule 13

*The C column shows the count of subgroups with mean importance values below 2.50

What is your gender?

	Female				Male				
T89	542	2.81	0.04	0.96	954	2.63	0.03	1.01	0
T90	767	3.90	0.01	0.32	1336	3.79	0.01	0.47	0
T91	633	3.70	0.02	0.56	1226	3.54	0.02	0.69	0
T92	733	3.18	0.03	0.84	1272	3.00	0.03	0.91	0
T93	721	3.50	0.03	0.70	1277	3.34	0.02	0.81	0
T94	724	3.60	0.02	0.67	1264	3.47	0.02	0.75	0
T95	671	3.03	0.04	0.93	1200	2.83	0.03	0.98	0
T96	650	2.78	0.04	1.00	1153	2.58	0.03	1.03	0
T97	673	2.94	0.04	0.94	1195	2.75	0.03	1.00	0
T98	675	3.41	0.03	0.81	1194	3.19	0.03	0.94	0
T99	603	3.02	0.04	0.95	1112	2.83	0.03	1.00	0
T100	592	2.84	0.04	0.99	1047	2.64	0.03	1.04	0
T101	700	3.51	0.03	0.74	1253	3.29	0.02	0.88	0
T102	714	3.52	0.03	0.72	1270	3.39	0.02	0.77	0
T103	686	3.63	0.03	0.70	1225	3.52	0.02	0.76	0
T104	648	3.65	0.03	0.65	1202	3.55	0.02	0.74	0
T105	511	3.31	0.04	0.87	1110	3.22	0.03	0.92	0
T106	423	3.20	0.04	0.90	979	3.14	0.03	0.97	0
T107	533	3.62	0.03	0.71	1130	3.52	0.02	0.76	0
T108	532	3.62	0.03	0.70	1122	3.53	0.02	0.74	0
T109	752	3.69	0.02	0.58	1317	3.51	0.02	0.72	0
T110	753	3.63	0.02	0.62	1317	3.46	0.02	0.76	0
T111	732	3.51	0.03	0.71	1304	3.34	0.02	0.81	0
T112	635	3.24	0.03	0.86	1223	3.08	0.03	0.93	0
T113	615	3.18	0.04	0.88	1176	3.01	0.03	0.94	0
T114	678	3.45	0.03	0.74	1237	3.23	0.02	0.84	0
T115	714	3.61	0.02	0.64	1257	3.45	0.02	0.75	0
T116	612	3.68	0.02	0.60	1180	3.60	0.02	0.66	0
T117	566	3.52	0.03	0.74	1139	3.39	0.02	0.80	0
T118	603	3.68	0.02	0.59	1183	3.62	0.02	0.66	0
T119	534	3.40	0.04	0.87	1093	3.33	0.03	0.88	0
T120	755	3.80	0.02	0.46	1319	3.69	0.02	0.59	0
T121	654	3.43	0.03	0.74	1240	3.28	0.02	0.87	0
T122	486	3.43	0.04	0.79	1036	3.36	0.03	0.83	0
T123	467	3.54	0.03	0.72	1020	3.50	0.02	0.76	0
T124	619	3.37	0.03	0.80	1125	3.19	0.03	0.93	0
T125	686	3.17	0.03	0.86	1207	2.94	0.03	0.94	0
T126	687	3.24	0.03	0.84	1207	3.00	0.03	0.93	0
T127	668	2.92	0.04	0.93	1173	2.67	0.03	0.98	0
T128	644	2.77	0.04	0.95	1130	2.56	0.03	0.99	0
T129	659	2.95	0.04	0.91	1153	2.70	0.03	1.00	0
T130	671	3.41	0.03	0.77	1204	3.25	0.02	0.84	0
T131	697	3.54	0.03	0.72	1260	3.46	0.02	0.77	0
T132	596	3.24	0.03	0.84	1126	3.16	0.03	0.88	0
T133	697	3.80	0.02	0.51	1279	3.75	0.02	0.58	0

Importance Ratings by Subgroups Based on Gender Rule 13

*The C column shows the count of subgroups with mean importance values below 2.50

What is your gender?

	Female				Male				
T134	703	3.76	0.02	0.55	1281	3.71	0.02	0.63	0
T135	725	3.80	0.02	0.47	1306	3.72	0.02	0.57	0
T136	718	3.65	0.02	0.64	1279	3.51	0.02	0.74	0
T137	658	3.75	0.02	0.61	1210	3.70	0.02	0.65	0
T138	670	3.86	0.02	0.44	1239	3.79	0.01	0.52	0
T139	683	3.93	0.01	0.29	1255	3.91	0.01	0.35	0
T140	734	3.92	0.01	0.30	1308	3.87	0.01	0.38	0
T141	742	3.92	0.01	0.28	1306	3.85	0.01	0.39	0
T142	757	3.88	0.01	0.36	1327	3.82	0.01	0.45	0
T143	764	3.85	0.01	0.39	1320	3.75	0.01	0.49	0
T144	754	3.87	0.01	0.38	1323	3.81	0.01	0.47	0
T145	763	3.87	0.01	0.37	1330	3.81	0.01	0.45	0
T146	760	3.86	0.01	0.41	1334	3.84	0.01	0.43	0

Q16: What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	771	33.6	36.3	36.3
	Male	1353	58.9	63.7	100.0
	Total	2124	92.5	100.0	
Missing	System	173	7.5		
Total		2297	100.0		

APPENDIX T

Description and Findings of Analyses of Professional Networks

Methodology

Data for 146 tasks were analyzed using the ordinal regression procedure of SPSS. The SPSS ordinal regression procedure, or PLUM (**Pol**ytomous **U**niversal **M**odel), is an extension of the general linear model to ordinal categorical data. The ordinal logistic model is based on the assumption that there is a latent continuous outcome variable and that the observed ordinal outcome arises from the apportionment of the underlying continuum into *j*-ordered groups. The thresholds estimate these cutoff values.

The basic form of the generalized linear model is as follows:

$$link(\gamma_j) = \frac{\theta_j - [\beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_k x_k]}{exp(\tau_1 z_1 + \tau_2 z_2 + \cdots \tau_m z_m)}$$

Where, γ_j is the cumulative probability for the j_{th} category, θ_j is the threshold for the j_{th} category, $\beta_1 \cdots \beta_k$ are the regression coefficients, $x_1 \cdots x_k$ are the predictor variables, and *k* is the number of predictors.

The numerator on the right side determines the location of the model. The denominator of the equation specifies the scale. $\tau_1 \cdots \tau_m$ are coefficients for the scale component and $z_1 \cdots z_m$ are *m* predictor variables for the scale component (chosen from the same set of variables as the *x*'s).

The link function ($link(\gamma_j)$) is the function of the probabilities that results in a linear model in the parameters. It is the link between the random component on the left side of the equation and the systematic component on the right. Five different link functions are available in the Ordinal Regression procedure in SPSS (Table 1).

Table 1. Link functions available in SPSS

Function	Form	Typical Application
Logit	$ln\left(\frac{\gamma}{1-\gamma}\right)$	Evenly distributed categories
Complimentary log-log	$ln(1-ln(1-\gamma))$	Higher categories more probable
Negative log-log	$-ln(-ln(\gamma))$	Lower categories more probable
Probit	$\Phi^{-1}(\gamma)$	Analyses with explicit normally distributed latent variable
Cauchit	$\tan(\pi(\gamma - 0.5))$	Outcome with many extreme values

Extensive preliminary exploration of the data set was performed in order to determine which of the five link functions should be used in our models. The most appropriate link function for fitting the present data set was found to be the logit function. Given this, the general form of the models fitted to these data is as follows:

$$ln\left(\frac{\gamma}{1-\gamma}\right) = \frac{\theta_j - [\beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_k x_k]}{exp(\tau_1 z_1 + \tau_2 z_2 + \cdots \tau_m z_m)}$$

In each separate analysis we fitted five covariates. These covariates were as follows:

- The number of medical examiners known to the respondent who are APNs (β_1)
- The number of medical examiners known to the respondent who are DCs (β_2)
- The number of medical examiners known to the respondent who are DOs (β_3)
- The number of medical examiners known to the respondent who are MDs (β_4)
- The number of medical examiners known to the respondent who are PAs (β_5)

Task #1

Warnings

There are 4919 (77.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_1	0	44	2.2%
	1	18	.9%
	2	68	3.4%
	3	336	16.9%
	4	1525	76.6%
Valid		1991	100.0%
Missing		306	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5128.269	5055	.232
Deviance	2079.984	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.006
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_1 = 0]	-3.762	.157	572.039	1	.000	-4.070	-3.454
	[p3_1 = 1]	-3.409	.135	640.530	1	.000	-3.673	-3.145
	[p3_1 = 2]	-2.632	.099	711.768	1	.000	-2.826	-2.439
	[p3_1 = 3]	-1.154	.066	307.883	1	.000	-1.283	-1.025
Location	p12_14apn	-.001	.007	.021	1	.886	-.015	.013
	p12_14dc	.038	.016	5.390	1	.020	.006	.070
	p12_14do	.000	.009	.000	1	.991	-.018	.018
	p12_14md	-.002	.004	.358	1	.550	-.010	.006
	p12_14pa	.005	.008	.444	1	.505	-.011	.021

Link function: Logit.

Task #2

Warnings

There are 4807 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_2	0	25	1.3%
	1	81	4.1%
	2	191	9.7%
	3	485	24.6%
	4	1191	60.4%
Valid		1973	100.0%
Missing		324	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5027.054	5023	.481
Deviance	2879.581	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_2 = 0]	-4.326	.204	450.494	1	.000	-4.725	-3.926
	[p3_2 = 1]	-2.839	.105	732.633	1	.000	-3.044	-2.633
	[p3_2 = 2]	-1.700	.071	577.733	1	.000	-1.838	-1.561
	[p3_2 = 3]	-.388	.056	47.261	1	.000	-.499	-.277
Location	p12_14apn	.007	.007	.996	1	.318	-.006	.020
	p12_14dc	.015	.009	2.719	1	.099	-.003	.033
	p12_14do	-.006	.008	.637	1	.425	-.022	.009
	p12_14md	.001	.004	.161	1	.688	-.006	.009
	p12_14pa	6.21E-005	.007	.000	1	.992	-.013	.013

Link function: Logit.

Task #3

Warnings

There are 3658 (72.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_3	1	1	.1%
	2	36	1.8%
	3	468	23.5%
	4	1484	74.6%
Valid		1989	100.0%
Missing		308	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	2676.536	3784	1.000
Deviance	1657.831	3784	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.006
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_3 = 1]	-7.523	1.001	56.470	1	.000	-9.485	-5.561
	[p3_3 = 2]	-3.894	.170	522.655	1	.000	-4.227	-3.560
	[p3_3 = 3]	-1.001	.065	239.959	1	.000	-1.128	-.874
Location	p12_14apn	.012	.009	1.522	1	.217	-.007	.030
	p12_14dc	-.004	.008	.258	1	.611	-.020	.012
	p12_14do	.000	.011	.001	1	.971	-.020	.021
	p12_14md	.009	.005	3.776	1	.052	-8.16E-005	.019
	p12_14pa	-.006	.007	.751	1	.386	-.021	.008

Link function: Logit.

Task #4

Warnings

There are 4879 (77.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_4	0	1	.1%
	1	9	.5%
	2	104	5.2%
	3	652	32.8%
	4	1219	61.4%
Valid		1985	100.0%
Missing		312	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	3761.040	5051	1.000
Deviance	2223.089	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_4 = 0]	-7.523	1.001	56.505	1	.000	-9.485	-5.562
	[p3_4 = 1]	-5.216	.319	267.910	1	.000	-5.841	-4.592
	[p3_4 = 2]	-2.728	.102	718.126	1	.000	-2.928	-2.529
	[p3_4 = 3]	-.391	.057	46.535	1	.000	-.503	-.278
Location	p12_14apn	.010	.007	1.723	1	.189	-.005	.024
	p12_14dc	.007	.008	.718	1	.397	-.009	.023
	p12_14do	.001	.009	.009	1	.926	-.016	.018
	p12_14md	.006	.004	2.553	1	.110	-.001	.014
	p12_14pa	-.004	.007	.279	1	.597	-.017	.010

Link function: Logit.

Task #5

Warnings

There are 4836 (76.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_5	0	2	.1%
	1	24	1.2%
	2	272	13.7%
	3	770	38.8%
	4	916	46.2%
Valid		1984	100.0%
Missing		313	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	3846.342	5051	1.000
Deviance	2784.696	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.006
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_5 = 0]	-6.839	.708	93.343	1	.000	-8.227	-5.452
	[p3_5 = 1]	-4.262	.200	455.878	1	.000	-4.653	-3.871
	[p3_5 = 2]	-1.673	.070	576.389	1	.000	-1.810	-1.536
	[p3_5 = 3]	.220	.055	16.076	1	.000	.113	.328
Location	p12_14apn	.002	.006	.160	1	.689	-.009	.014
	p12_14dc	.011	.008	2.156	1	.142	-.004	.026
	p12_14do	.002	.008	.044	1	.835	-.014	.017
	p12_14md	.009	.004	6.110	1	.013	.002	.016
	p12_14pa	-.010	.006	2.681	1	.102	-.022	.002

Link function: Logit.

Task #6

Warnings

There are 4908 (77.6%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_6	0	3	.2%
	1	2	.1%
	2	45	2.3%
	3	545	27.5%
	4	1389	70.0%
Valid		1984	100.0%
Missing		313	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4232.271	5051	1.000
Deviance	1841.409	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.007
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_6 = 0]	-6.392	.579	121.892	1	.000	-7.527	-5.258
	[p3_6 = 1]	-5.881	.449	171.319	1	.000	-6.761	-5.000
	[p3_6 = 2]	-3.554	.148	579.374	1	.000	-3.844	-3.265
	[p3_6 = 3]	-.741	.062	144.077	1	.000	-.862	-.620
Location	p12_14apn	.008	.008	1.053	1	.305	-.008	.024
	p12_14dc	.002	.008	.083	1	.774	-.014	.019
	p12_14do	-.004	.010	.191	1	.662	-.023	.015
	p12_14md	.011	.005	5.186	1	.023	.001	.020
	p12_14pa	.002	.008	.057	1	.811	-.013	.017

Link function: Logit.

Task #7

Warnings

There are 4908 (77.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_7	0	1	.1%
	1	4	.2%
	2	40	2.0%
	3	450	22.7%
	4	1490	75.1%
Valid		1985	100.0%
Missing		312	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5888.560	5039	.000
Deviance	1694.022	5039	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.002
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_7 = 0]	-7.552	1.001	56.884	1	.000	-9.514	-5.589
	[p3_7 = 1]	-5.939	.449	174.753	1	.000	-6.820	-5.059
	[p3_7 = 2]	-3.720	.155	574.209	1	.000	-4.025	-3.416
	[p3_7 = 3]	-1.057	.064	270.669	1	.000	-1.183	-.931
Location	p12_14apn	.004	.008	.219	1	.640	-.012	.019
	p12_14dc	.010	.010	.920	1	.337	-.010	.030
	p12_14do	-.011	.009	1.502	1	.220	-.028	.007
	p12_14md	.007	.005	2.117	1	.146	-.002	.016
	p12_14pa	-.003	.007	.122	1	.727	-.017	.012

Link function: Logit.

Task #8

Warnings

There are 4925 (77.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_8	0	3	.2%
	1	9	.5%
	2	41	2.1%
	3	359	18.1%
	4	1570	79.2%
Valid		1982	100.0%
Missing		315	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4960.426	5051	.816
Deviance	1608.431	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.010
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_8 = 0]	-6.450	.580	123.877	1	.000	-7.586	-5.314
	[p3_8 = 1]	-5.059	.293	298.665	1	.000	-5.633	-4.485
	[p3_8 = 2]	-3.551	.146	594.713	1	.000	-3.837	-3.266
	[p3_8 = 3]	-1.288	.070	339.687	1	.000	-1.425	-1.151
Location	p12_14apn	.002	.008	.092	1	.761	-.013	.017
	p12_14dc	.038	.018	4.548	1	.033	.003	.072
	p12_14do	.022	.013	2.653	1	.103	-.004	.048
	p12_14md	-.008	.004	3.615	1	.057	-.016	.000
	p12_14pa	.011	.010	1.401	1	.237	-.007	.030

Link function: Logit.

Task #9

Warnings

There are 4870 (77.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_9	0	38	1.9%
	1	23	1.2%
	2	88	4.4%
	3	368	18.6%
	4	1462	73.9%
Valid		1979	100.0%
Missing		318	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4810.011	5031	.987
Deviance	2160.667	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_9 = 0]	-3.869	.168	529.359	1	.000	-4.199	-3.540
	[p3_9 = 1]	-3.384	.136	623.275	1	.000	-3.649	-3.118
	[p3_9 = 2]	-2.443	.093	683.708	1	.000	-2.626	-2.260
	[p3_9 = 3]	-.970	.064	227.506	1	.000	-1.096	-.844
Location	p12_14apn	.003	.007	.135	1	.713	-.011	.017
	p12_14dc	.029	.014	4.411	1	.036	.002	.057
	p12_14do	.024	.013	3.319	1	.068	-.002	.050
	p12_14md	-.003	.004	.540	1	.462	-.011	.005
	p12_14pa	.004	.008	.211	1	.646	-.012	.019

Link function: Logit.

Task #10

Warnings

There are 4941 (78.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_10	0	4	.2%
	1	6	.3%
	2	55	2.8%
	3	336	16.9%
	4	1588	79.8%
Valid		1989	100.0%
Missing		308	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4157.874	5055	1.000
Deviance	1684.387	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.001
Nagelkerke	.002
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_10 = 0]	-6.189	.502	151.921	1	.000	-7.173	-5.205
	[p3_10 = 1]	-5.270	.320	271.865	1	.000	-5.896	-4.644
	[p3_10 = 2]	-3.369	.132	646.875	1	.000	-3.629	-3.110
	[p3_10 = 3]	-1.356	.069	384.905	1	.000	-1.492	-1.221
Location	p12_14apn	.007	.009	.607	1	.436	-.011	.025
	p12_14dc	-.007	.008	.702	1	.402	-.023	.009
	p12_14do	-.003	.010	.082	1	.775	-.023	.017
	p12_14md	.004	.005	.773	1	.379	-.005	.014
	p12_14pa	-.005	.008	.422	1	.516	-.020	.010

Link function: Logit.

Task #11

Warnings

There are 4899 (77.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_11	0	9	.5%
	1	14	.7%
	2	96	4.8%
	3	404	20.3%
	4	1463	73.7%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5708.916	5055	.000
Deviance	2050.752	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.008
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_11 = 0]	-5.357	.336	253.626	1	.000	-6.016	-4.697
	[p3_11 = 1]	-4.411	.213	427.584	1	.000	-4.829	-3.993
	[p3_11 = 2]	-2.716	.102	705.928	1	.000	-2.916	-2.515
	[p3_11 = 3]	-.986	.064	236.195	1	.000	-1.112	-.860
Location	p12_14apn	.031	.012	6.410	1	.011	.007	.056
	p12_14dc	.002	.009	.050	1	.823	-.015	.019
	p12_14do	-.010	.009	1.367	1	.242	-.027	.007
	p12_14md	-.003	.004	.613	1	.434	-.011	.005
	p12_14pa	.009	.008	1.065	1	.302	-.008	.025

Link function: Logit.

Type #12

Warnings

There are 4802 (75.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_12	0	21	1.1%
	1	85	4.3%
	2	452	22.8%
	3	884	44.6%
	4	539	27.2%
Valid		1981	100.0%
Missing		316	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5069.641	5055	.440
Deviance	3294.795	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.010
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_12 = 0]	-4.521	.222	416.320	1	.000	-4.956	-4.087
	[p3_12 = 1]	-2.857	.104	748.414	1	.000	-3.062	-2.653
	[p3_12 = 2]	-.916	.058	245.795	1	.000	-1.031	-.802
	[p3_12 = 3]	1.017	.059	294.051	1	.000	.901	1.133
Location	p12_14apn	.008	.006	2.115	1	.146	-.003	.020
	p12_14dc	.031	.008	13.235	1	.000	.014	.047
	p12_14do	.005	.008	.457	1	.499	-.010	.020
	p12_14md	-.005	.003	2.207	1	.137	-.012	.002
	p12_14pa	.001	.006	.021	1	.883	-.011	.013

Link function: Logit.

Task #13

Warnings

There are 4925 (77.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_13	0	2	.1%
	1	3	.2%
	2	42	2.1%
	3	375	18.8%
	4	1569	78.8%
Valid		1991	100.0%
Missing		306	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5235.076	5055	.038
Deviance	1584.708	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.001
Nagelkerke	.002
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_13 = 0]	-6.894	.709	94.636	1	.000	-8.283	-5.505
	[p3_13 = 1]	-5.976	.450	176.691	1	.000	-6.858	-5.095
	[p3_13 = 2]	-3.714	.153	590.099	1	.000	-4.014	-3.414
	[p3_13 = 3]	-1.303	.068	370.284	1	.000	-1.436	-1.171
Location	p12_14apn	.009	.009	.996	1	.318	-.009	.027
	p12_14dc	.004	.010	.190	1	.663	-.015	.024
	p12_14do	-.009	.009	1.003	1	.316	-.027	.009
	p12_14md	.000	.004	.002	1	.965	-.008	.009
	p12_14pa	.001	.008	.012	1	.913	-.015	.017

Link function: Logit.

Task #14

Warnings

There are 4877 (77.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_14	0	2	.1%
	1	8	.4%
	2	118	5.9%
	3	606	30.5%
	4	1252	63.0%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4758.171	5059	.999
Deviance	2226.490	5059	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_14 = 0]	-6.891	.708	94.674	1	.000	-8.280	-5.503
	[p3_14 = 1]	-5.278	.319	274.035	1	.000	-5.903	-4.653
	[p3_14 = 2]	-2.665	.097	749.152	1	.000	-2.856	-2.474
	[p3_14 = 3]	-.521	.057	82.396	1	.000	-.634	-.409
Location	p12_14apn	.005	.007	.569	1	.451	-.008	.018
	p12_14dc	.010	.009	1.197	1	.274	-.008	.027
	p12_14do	.013	.009	1.898	1	.168	-.005	.031
	p12_14md	-.005	.004	1.787	1	.181	-.012	.002
	p12_14pa	.001	.007	.044	1	.834	-.012	.015

Link function: Logit.

Task #15

Warnings

There are 4984 (78.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_15	0	1	.1%
	1	2	.1%
	2	11	.6%
	3	219	11.0%
	4	1751	88.3%
Valid		1984	100.0%
Missing		313	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5576.991	5051	.000
Deviance	1025.691	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.016
McFadden	.011

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_15 = 0]	-7.442	1.002	55.186	1	.000	-9.406	-5.479
	[p3_15 = 1]	-6.343	.581	119.316	1	.000	-7.481	-5.204
	[p3_15 = 2]	-4.796	.274	305.365	1	.000	-5.334	-4.258
	[p3_15 = 3]	-1.858	.091	414.834	1	.000	-2.037	-1.679
Location	p12_14apn	.018	.017	1.102	1	.294	-.015	.050
	p12_14dc	-.014	.009	2.597	1	.107	-.032	.003
	p12_14do	-.006	.016	.123	1	.726	-.037	.026
	p12_14md	.024	.009	7.144	1	.008	.007	.042
	p12_14pa	-.007	.011	.390	1	.532	-.027	.014

Link function: Logit.

Task #16

Warnings

There are 4963 (78.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_16	0	1	.1%
	1	5	.3%
	2	26	1.3%
	3	278	14.0%
	4	1679	84.4%
Valid		1989	100.0%
Missing		308	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4371.810	5055	1.000
Deviance	1301.226	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.020
McFadden	.013

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_16 = 0]	-7.435	1.001	55.118	1	.000	-9.397	-5.472
	[p3_16 = 1]	-5.640	.412	187.305	1	.000	-6.448	-4.832
	[p3_16 = 2]	-3.953	.186	452.540	1	.000	-4.317	-3.589
	[p3_16 = 3]	-1.518	.081	347.894	1	.000	-1.678	-1.359
Location	p12_14apn	.001	.010	.016	1	.899	-.019	.021
	p12_14dc	-.014	.008	2.904	1	.088	-.031	.002
	p12_14do	.003	.017	.038	1	.846	-.030	.036
	p12_14md	.030	.009	12.027	1	.001	.013	.047
	p12_14pa	-.010	.009	1.186	1	.276	-.028	.008

Link function: Logit.

Task #17

Warnings

There are 4804 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_17	0	11	.6%
	1	23	1.2%
	2	299	15.1%
	3	818	41.3%
	4	832	42.0%
Valid		1983	100.0%
Missing		314	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5002.695	5035	.624
Deviance	2895.390	5035	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_17 = 0]	-5.159	.304	288.315	1	.000	-5.755	-4.564
	[p3_17 = 1]	-4.019	.176	523.984	1	.000	-4.363	-3.675
	[p3_17 = 2]	-1.569	.067	545.417	1	.000	-1.701	-1.438
	[p3_17 = 3]	.359	.055	42.542	1	.000	.251	.467
Location	p12_14apn	.008	.006	1.681	1	.195	-.004	.020
	p12_14dc	.012	.008	2.564	1	.109	-.003	.027
	p12_14do	.005	.008	.364	1	.546	-.011	.020
	p12_14md	.000	.003	.001	1	.972	-.007	.007
	p12_14pa	-.003	.006	.192	1	.661	-.015	.009

Link function: Logit.

Task #18

Warnings

There are 4810 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_18	0	4	.2%
	1	12	.6%
	2	207	10.5%
	3	750	38.1%
	4	998	50.6%
Valid		1971	100.0%
Missing		326	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5052.565	5027	.397
Deviance	2554.911	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_18 = 0]	-6.143	.502	149.978	1	.000	-7.126	-5.160
	[p3_18 = 1]	-4.751	.253	352.718	1	.000	-5.246	-4.255
	[p3_18 = 2]	-2.003	.078	667.651	1	.000	-2.155	-1.851
	[p3_18 = 3]	.035	.055	.410	1	.522	-.073	.144
Location	p12_14apn	.016	.007	4.697	1	.030	.001	.030
	p12_14dc	.004	.007	.308	1	.579	-.010	.019
	p12_14do	-.006	.008	.650	1	.420	-.022	.009
	p12_14md	.003	.004	.892	1	.345	-.004	.010
	p12_14pa	.001	.006	.051	1	.822	-.011	.014

Link function: Logit.

Task #19

Warnings

There are 4831 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_19	0	3	.2%
	1	14	.7%
	2	229	11.5%
	3	755	38.0%
	4	985	49.6%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5197.222	5051	.074
Deviance	2620.087	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_19 = 0]	-6.478	.579	125.242	1	.000	-7.612	-5.343
	[p3_19 = 1]	-4.736	.246	371.499	1	.000	-5.218	-4.254
	[p3_19 = 2]	-1.939	.075	666.628	1	.000	-2.087	-1.792
	[p3_19 = 3]	.039	.055	.501	1	.479	-.069	.147
Location	p12_14apn	.020	.007	7.080	1	.008	.005	.034
	p12_14dc	.008	.008	1.057	1	.304	-.007	.023
	p12_14do	.001	.008	.035	1	.852	-.014	.017
	p12_14md	-.002	.003	.346	1	.556	-.009	.005
	p12_14pa	-.005	.006	.557	1	.456	-.017	.008

Link function: Logit.

Task #20

Warnings

There are 4921 (77.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_20	0	6	.3%
	1	8	.4%
	2	69	3.5%
	3	371	18.7%
	4	1534	77.2%
Valid		1988	100.0%
Missing		309	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4018.751	5055	1.000
Deviance	1779.239	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.010
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_20 = 0]	-5.744	.411	195.533	1	.000	-6.549	-4.939
	[p3_20 = 1]	-4.892	.271	325.459	1	.000	-5.423	-4.360
	[p3_20 = 2]	-3.075	.119	665.669	1	.000	-3.308	-2.841
	[p3_20 = 3]	-1.151	.067	294.850	1	.000	-1.282	-1.019
Location	p12_14apn	.014	.010	1.746	1	.186	-.007	.034
	p12_14dc	-.014	.008	3.532	1	.060	-.029	.001
	p12_14do	-.018	.009	3.811	1	.051	-.036	7.20E-005
	p12_14md	.012	.005	5.363	1	.021	.002	.023
	p12_14pa	-.001	.008	.014	1	.906	-.017	.015

Link function: Logit.

Task #21

Warnings

There are 4780 (75.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_21	0	12	.6%
	1	102	5.1%
	2	577	29.0%
	3	811	40.8%
	4	487	24.5%
Valid		1989	100.0%
Missing		308	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4991.678	5055	.734
Deviance	3291.821	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_21 = 0]	-5.041	.291	300.109	1	.000	-5.612	-4.471
	[p3_21 = 1]	-2.737	.101	739.961	1	.000	-2.934	-2.539
	[p3_21 = 2]	-.563	.055	102.854	1	.000	-.671	-.454
	[p3_21 = 3]	1.204	.061	389.324	1	.000	1.085	1.324
Location	p12_14apn	.014	.006	5.628	1	.018	.002	.025
	p12_14dc	.021	.007	7.993	1	.005	.006	.036
	p12_14do	.007	.008	.867	1	.352	-.008	.022
	p12_14md	.001	.003	.029	1	.865	-.006	.007
	p12_14pa	-.002	.006	.063	1	.802	-.013	.010

Link function: Logit.

Task #22

Warnings

There are 4769 (75.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_22	0	14	.7%
	1	138	7.0%
	2	533	26.9%
	3	741	37.4%
	4	555	28.0%
Valid		1981	100.0%
Missing		316	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5269.022	5043	.013
Deviance	3446.007	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_22 = 0]	-4.945	.270	335.569	1	.000	-5.474	-4.416
	[p3_22 = 1]	-2.486	.090	769.148	1	.000	-2.661	-2.310
	[p3_22 = 2]	-.632	.056	128.348	1	.000	-.742	-.523
	[p3_22 = 3]	.955	.058	267.849	1	.000	.840	1.069
Location	p12_14apn	.009	.006	2.628	1	.105	-.002	.020
	p12_14dc	.017	.007	5.239	1	.022	.002	.031
	p12_14do	.008	.007	1.036	1	.309	-.007	.022
	p12_14md	-.005	.003	2.197	1	.138	-.011	.002
	p12_14pa	-.002	.006	.153	1	.696	-.014	.009

Link function: Logit.

Task #23

Warnings

There are 4923 (78.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_23	0	1	.1%
	1	4	.2%
	2	31	1.6%
	3	304	15.4%
	4	1636	82.8%
Valid		1976	100.0%
Missing		321	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	6026.532	5027	.000
Deviance	1362.038	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.013
Nagelkerke	.021
McFadden	.013

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_23 = 0]	-7.418	1.002	54.860	1	.000	-9.381	-5.455
	[p3_23 = 1]	-5.806	.451	166.056	1	.000	-6.689	-4.923
	[p3_23 = 2]	-3.815	.176	472.332	1	.000	-4.159	-3.471
	[p3_23 = 3]	-1.387	.078	312.188	1	.000	-1.540	-1.233
Location	p12_14apn	.031	.017	3.234	1	.072	-.003	.065
	p12_14dc	-.014	.009	2.568	1	.109	-.031	.003
	p12_14do	-.013	.013	1.049	1	.306	-.037	.012
	p12_14md	.024	.008	9.988	1	.002	.009	.039
	p12_14pa	-.001	.010	.017	1	.896	-.021	.018

Link function: Logit.

Task #24

Warnings

There are 4790 (75.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_24	0	22	1.1%
	1	100	5.0%
	2	580	29.1%
	3	814	40.9%
	4	474	23.8%
Valid		1990	100.0%
Missing		307	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5185.035	5055	.099
Deviance	3389.600	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_24 = 0]	-4.442	.216	421.525	1	.000	-4.866	-4.018
	[p3_24 = 1]	-2.676	.098	749.403	1	.000	-2.868	-2.485
	[p3_24 = 2]	-.549	.055	98.647	1	.000	-.658	-.441
	[p3_24 = 3]	1.230	.061	402.512	1	.000	1.110	1.350
Location	p12_14apn	.012	.006	4.609	1	.032	.001	.024
	p12_14dc	.020	.007	7.293	1	.007	.005	.034
	p12_14do	.007	.007	.990	1	.320	-.007	.022
	p12_14md	-.001	.003	.065	1	.798	-.007	.006
	p12_14pa	.000	.006	.003	1	.954	-.012	.011

Link function: Logit.

Task #25

Warnings

There are 4825 (76.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_25	0	1	.1%
	1	22	1.1%
	2	209	10.6%
	3	726	36.7%
	4	1022	51.6%
Valid		1980	100.0%
Missing		317	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5857.296	5039	.000
Deviance	2600.165	5039	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.002
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_25 = 0]	-7.547	1.001	56.864	1	.000	-9.508	-5.585
	[p3_25 = 1]	-4.400	.212	430.987	1	.000	-4.815	-3.985
	[p3_25 = 2]	-1.975	.076	669.806	1	.000	-2.125	-1.826
	[p3_25 = 3]	-.018	.055	.110	1	.740	-.126	.090
Location	p12_14apn	.007	.006	1.110	1	.292	-.006	.019
	p12_14dc	.007	.008	.831	1	.362	-.008	.022
	p12_14do	.002	.008	.044	1	.834	-.014	.018
	p12_14md	.002	.004	.490	1	.484	-.004	.009
	p12_14pa	-.001	.006	.023	1	.879	-.013	.012

Link function: Logit.

Task #26

Warnings

There are 4774 (75.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_26	0	18	.9%
	1	59	3.0%
	2	342	17.3%
	3	726	36.7%
	4	833	42.1%
Valid		1978	100.0%
Missing		319	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4769.145	5035	.996
Deviance	3094.128	5035	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.009
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_26 = 0]	-4.641	.239	378.048	1	.000	-5.109	-4.173
	[p3_26 = 1]	-3.157	.120	690.993	1	.000	-3.392	-2.921
	[p3_26 = 2]	-1.261	.063	404.217	1	.000	-1.384	-1.139
	[p3_26 = 3]	.380	.055	47.233	1	.000	.272	.488
Location	p12_14apn	.010	.006	2.568	1	.109	-.002	.022
	p12_14dc	.021	.008	6.266	1	.012	.005	.037
	p12_14do	.005	.008	.466	1	.495	-.010	.021
	p12_14md	.004	.003	1.477	1	.224	-.003	.011
	p12_14pa	-.011	.006	3.255	1	.071	-.023	.001

Link function: Logit.

Task #27

Warnings

There are 4946 (78.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_27	0	6	.3%
	1	8	.4%
	2	39	2.0%
	3	236	11.9%
	4	1689	85.4%
Valid		1978	100.0%
Missing		319	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4860.612	5047	.969
Deviance	1373.706	5047	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.014
McFadden	.009

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_27 = 0]	-5.706	.411	192.338	1	.000	-6.512	-4.899
	[p3_27 = 1]	-4.854	.272	317.347	1	.000	-5.388	-4.320
	[p3_27 = 2]	-3.502	.148	562.011	1	.000	-3.791	-3.212
	[p3_27 = 3]	-1.667	.081	425.678	1	.000	-1.826	-1.509
Location	p12_14apn	.061	.022	7.452	1	.006	.017	.105
	p12_14dc	.009	.012	.492	1	.483	-.015	.033
	p12_14do	-.024	.010	5.709	1	.017	-.044	-.004
	p12_14md	.008	.006	1.717	1	.190	-.004	.019
	p12_14pa	-.008	.009	.787	1	.375	-.024	.009

Link function: Logit.

Task #28

Warnings

There are 3736 (73.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_28	1	1	.1%
	2	11	.6%
	3	145	7.3%
	4	1829	92.1%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	2555.610	3787	1.000
Deviance	795.116	3787	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.014
McFadden	.011

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_28 = 1]	-7.413	1.003	54.660	1	.000	-9.378	-5.448
	[p3_28 = 2]	-4.922	.298	273.515	1	.000	-5.506	-4.339
	[p3_28 = 3]	-2.269	.108	438.885	1	.000	-2.481	-2.057
Location	p12_14apn	.018	.020	.798	1	.372	-.021	.057
	p12_14dc	.014	.019	.535	1	.465	-.023	.050
	p12_14do	-.015	.016	.974	1	.324	-.046	.015
	p12_14md	.029	.011	6.867	1	.009	.007	.051
	p12_14pa	-.013	.011	1.462	1	.227	-.034	.008

Link function: Logit.

Task #29

Warnings

There are 4871 (77.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_29	0	6	.3%
	1	13	.7%
	2	133	6.7%
	3	555	27.9%
	4	1280	64.4%
Valid		1987	100.0%
Missing		310	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4632.872	5055	1.000
Deviance	2269.929	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.010
Nagelkerke	.012
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_29 = 0]	-5.682	.410	191.823	1	.000	-6.486	-4.878
	[p3_29 = 1]	-4.522	.233	376.656	1	.000	-4.979	-4.065
	[p3_29 = 2]	-2.370	.091	675.331	1	.000	-2.549	-2.192
	[p3_29 = 3]	-.464	.059	61.146	1	.000	-.580	-.348
Location	p12_14apn	.011	.008	1.888	1	.169	-.005	.027
	p12_14dc	2.49E-005	.008	.000	1	.997	-.015	.015
	p12_14do	.010	.011	.769	1	.381	-.012	.032
	p12_14md	.013	.005	8.105	1	.004	.004	.022
	p12_14pa	-.006	.007	.842	1	.359	-.020	.007

Link function: Logit.

Task #30

Warnings

There are 4879 (77.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p3_30	0	13	.7%
	1	12	.6%
	2	85	4.3%
	3	474	23.9%
	4	1396	70.5%
Valid		1980	100.0%
Missing		317	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4964.181	5043	.783
Deviance	2107.572	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.010
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p3_30 = 0]	-4.908	.281	305.480	1	.000	-5.459	-4.358
	[p3_30 = 1]	-4.248	.205	430.434	1	.000	-4.649	-3.847
	[p3_30 = 2]	-2.720	.105	670.313	1	.000	-2.926	-2.514
	[p3_30 = 3]	-.751	.063	142.573	1	.000	-.874	-.628
Location	p12_14apn	.029	.012	5.732	1	.017	.005	.053
	p12_14dc	-.001	.008	.006	1	.939	-.016	.015
	p12_14do	.008	.011	.499	1	.480	-.014	.030
	p12_14md	.006	.004	1.743	1	.187	-.003	.015
	p12_14pa	.000	.008	.002	1	.962	-.015	.015

Link function: Logit.

Task #31

Warnings

There are 4735 (75.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_31	0	46	2.3%
	1	305	15.4%
	2	490	24.8%
	3	666	33.7%
	4	471	23.8%
Valid		1978	100.0%
Missing		319	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5350.382	5035	.001
Deviance	3829.099	5035	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.009
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_31 = 0]	-3.667	.152	583.591	1	.000	-3.965	-3.370
	[p4_31 = 1]	-1.462	.065	502.663	1	.000	-1.590	-1.334
	[p4_31 = 2]	-.224	.054	17.309	1	.000	-.330	-.119
	[p4_31 = 3]	1.252	.061	415.380	1	.000	1.132	1.372
Location	p12_14apn	.003	.006	.272	1	.602	-.008	.014
	p12_14dc	.006	.007	.729	1	.393	-.008	.019
	p12_14do	-.003	.007	.129	1	.720	-.017	.012
	p12_14md	.012	.003	13.173	1	.000	.006	.019
	p12_14pa	-.010	.006	2.717	1	.099	-.021	.002

Link function: Logit.

Task #32

Warnings

There are 4769 (75.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_32	0	7	.4%
	1	122	6.2%
	2	524	26.5%
	3	804	40.7%
	4	520	26.3%
Valid		1977	100.0%
Missing		320	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5159.814	5027	.093
Deviance	3361.217	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_32 = 0]	-5.594	.380	216.944	1	.000	-6.338	-4.850
	[p4_32 = 1]	-2.616	.095	751.357	1	.000	-2.803	-2.429
	[p4_32 = 2]	-.658	.056	138.044	1	.000	-.768	-.548
	[p4_32 = 3]	1.082	.060	328.957	1	.000	.966	1.199
Location	p12_14apn	.009	.006	2.508	1	.113	-.002	.020
	p12_14dc	.008	.007	1.425	1	.233	-.005	.022
	p12_14do	.002	.007	.044	1	.834	-.013	.016
	p12_14md	.001	.003	.055	1	.814	-.006	.007
	p12_14pa	.002	.006	.167	1	.683	-.009	.014

Link function: Logit.

Task #33

Warnings

There are 3680 (73.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_33	0	11	.6%
	2	15	.8%
	3	269	13.6%
	4	1679	85.1%
Valid		1974	100.0%
Missing		323	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5090.781	3763	.000
Deviance	1270.828	3763	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.013
McFadden	.009

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_33 = 0]	-5.011	.307	266.409	1	.000	-5.613	-4.409
	[p4_33 = 2]	-4.143	.204	411.072	1	.000	-4.544	-3.743
	[p4_33 = 3]	-1.558	.083	355.107	1	.000	-1.720	-1.396
Location	p12_14apn	.022	.016	1.889	1	.169	-.009	.053
	p12_14dc	-.004	.010	.210	1	.647	-.023	.014
	p12_14do	.000	.016	.000	1	.992	-.030	.031
	p12_14md	.019	.008	6.177	1	.013	.004	.034
	p12_14pa	.001	.011	.014	1	.907	-.020	.023

Link function: Logit.

Task #34

Warnings

There are 4913 (78.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_34	0	12	.6%
	1	7	.4%
	2	38	1.9%
	3	313	15.9%
	4	1604	81.3%
Valid		1974	100.0%
Missing		323	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5835.908	5027	.000
Deviance	1556.470	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.009
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_34 = 0]	-4.953	.293	285.389	1	.000	-5.528	-4.379
	[p4_34 = 1]	-4.490	.235	364.922	1	.000	-4.951	-4.030
	[p4_34 = 2]	-3.372	.142	564.298	1	.000	-3.650	-3.094
	[p4_34 = 3]	-1.317	.074	315.323	1	.000	-1.463	-1.172
Location	p12_14apn	.015	.012	1.544	1	.214	-.009	.039
	p12_14dc	.006	.011	.283	1	.594	-.015	.026
	p12_14do	.007	.015	.203	1	.652	-.022	.035
	p12_14md	.013	.006	4.382	1	.036	.001	.025
	p12_14pa	-8.30E-005	.009	.000	1	.993	-.019	.018

Link function: Logit.

Task #35

Warnings

There are 4832 (76.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_35	0	17	.9%
	1	14	.7%
	2	107	5.4%
	3	549	27.9%
	4	1280	65.1%
Valid		1967	100.0%
Missing		330	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4373.272	5015	1.000
Deviance	2278.202	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_35 = 0]	-4.717	.246	367.581	1	.000	-5.200	-4.235
	[p4_35 = 1]	-4.109	.184	497.184	1	.000	-4.471	-3.748
	[p4_35 = 2]	-2.558	.095	729.623	1	.000	-2.744	-2.372
	[p4_35 = 3]	-.592	.059	102.290	1	.000	-.707	-.478
Location	p12_14apn	.018	.009	4.390	1	.036	.001	.035
	p12_14dc	.011	.009	1.485	1	.223	-.007	.029
	p12_14do	-.001	.008	.005	1	.946	-.017	.016
	p12_14md	-.002	.004	.219	1	.640	-.009	.006
	p12_14pa	-.002	.007	.074	1	.786	-.015	.011

Link function: Logit.

Task #36

Warnings

There are 4808 (76.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_36	0	22	1.1%
	1	21	1.1%
	2	163	8.3%
	3	580	29.5%
	4	1180	60.0%
Valid		1966	100.0%
Missing		331	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4768.883	5003	.991
Deviance	2591.025	5003	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_36 = 0]	-4.462	.217	422.587	1	.000	-4.888	-4.037
	[p4_36 = 1]	-3.781	.158	573.760	1	.000	-4.091	-3.472
	[p4_36 = 2]	-2.124	.081	689.085	1	.000	-2.283	-1.966
	[p4_36 = 3]	-.381	.057	44.595	1	.000	-.493	-.269
Location	p12_14apn	.004	.006	.385	1	.535	-.008	.016
	p12_14dc	.003	.008	.149	1	.700	-.012	.018
	p12_14do	.011	.009	1.269	1	.260	-.008	.029
	p12_14md	-.006	.004	3.103	1	.078	-.013	.001
	p12_14pa	.014	.008	3.482	1	.062	-.001	.029

Link function: Logit.

Task #37

Warnings

There are 4855 (77.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_37	0	23	1.2%
	1	20	1.0%
	2	101	5.1%
	3	383	19.5%
	4	1439	73.2%
Valid		1966	100.0%
Missing		331	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4833.366	5007	.960
Deviance	2118.833	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_37 = 0]	-4.341	.213	415.280	1	.000	-4.759	-3.924
	[p4_37 = 1]	-3.705	.159	545.380	1	.000	-4.016	-3.394
	[p4_37 = 2]	-2.442	.094	669.087	1	.000	-2.627	-2.257
	[p4_37 = 3]	-.905	.064	199.886	1	.000	-1.031	-.780
Location	p12_14apn	.001	.007	.024	1	.876	-.013	.016
	p12_14dc	.006	.009	.475	1	.491	-.012	.025
	p12_14do	-5.63E-005	.010	.000	1	.996	-.020	.020
	p12_14md	.007	.005	2.488	1	.115	-.002	.016
	p12_14pa	.009	.009	.970	1	.325	-.009	.026

Link function: Logit.

Task #38

Warnings

There are 4768 (76.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_38	0	4	.2%
	1	58	3.0%
	2	269	13.7%
	3	673	34.3%
	4	959	48.9%
Valid		1963	100.0%
Missing		334	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	3837.279	5003	1.000
Deviance	2895.015	5003	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.011
Nagelkerke	.013
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_38 = 0]	-6.251	.502	155.312	1	.000	-7.234	-5.268
	[p4_38 = 1]	-3.473	.133	676.927	1	.000	-3.734	-3.211
	[p4_38 = 2]	-1.631	.069	565.411	1	.000	-1.765	-1.496
	[p4_38 = 3]	.023	.055	.172	1	.678	-.085	.130
Location	p12_14apn	.015	.007	5.491	1	.019	.002	.028
	p12_14dc	.015	.008	3.463	1	.063	-.001	.031
	p12_14do	.007	.008	.896	1	.344	-.008	.023
	p12_14md	-.015	.003	19.185	1	.000	-.022	-.008
	p12_14pa	.009	.006	2.007	1	.157	-.004	.022

Link function: Logit.

Task #39

Warnings

There are 4746 (75.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_39	0	11	.6%
	1	78	4.0%
	2	365	18.6%
	3	710	36.3%
	4	794	40.6%
Valid		1958	100.0%
Missing		339	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4715.178	4991	.997
Deviance	3192.516	4991	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.010
Nagelkerke	.011
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_39 = 0]	-5.199	.304	292.230	1	.000	-5.795	-4.603
	[p4_39 = 1]	-3.064	.113	732.528	1	.000	-3.286	-2.842
	[p4_39 = 2]	-1.207	.062	379.894	1	.000	-1.329	-1.086
	[p4_39 = 3]	.384	.055	48.307	1	.000	.276	.493
Location	p12_14apn	.012	.006	3.783	1	.052	-8.93E-005	.023
	p12_14dc	.020	.008	6.154	1	.013	.004	.037
	p12_14do	.004	.008	.222	1	.638	-.011	.018
	p12_14md	-.011	.003	10.916	1	.001	-.018	-.004
	p12_14pa	.010	.006	2.384	1	.123	-.003	.022

Link function: Logit.

Task #40

Warnings

There are 4766 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_40	0	14	.7%
	1	53	2.7%
	2	270	13.8%
	3	684	34.9%
	4	939	47.9%
Valid		1960	100.0%
Missing		337	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4865.145	4995	.904
Deviance	3006.325	4995	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_40 = 0]	-4.945	.270	335.209	1	.000	-5.474	-4.415
	[p4_40 = 1]	-3.350	.128	681.799	1	.000	-3.602	-3.099
	[p4_40 = 2]	-1.577	.068	544.037	1	.000	-1.710	-1.445
	[p4_40 = 3]	.083	.055	2.304	1	.129	-.024	.191
Location	p12_14apn	.010	.006	2.396	1	.122	-.003	.022
	p12_14dc	.003	.007	.143	1	.705	-.012	.017
	p12_14do	.009	.008	1.212	1	.271	-.007	.024
	p12_14md	-.008	.003	6.084	1	.014	-.015	-.002
	p12_14pa	.008	.006	1.556	1	.212	-.005	.021

Link function: Logit.

Task #41

Warnings

There are 4683 (74.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_41	0	172	8.8%
	1	189	9.7%
	2	449	22.9%
	3	635	32.4%
	4	513	26.2%
Valid		1958	100.0%
Missing		339	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4936.290	5003	.746
Deviance	3954.222	5003	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.013
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_41 = 0]	-2.330	.085	744.419	1	.000	-2.497	-2.163
	[p4_41 = 1]	-1.472	.065	505.416	1	.000	-1.600	-1.344
	[p4_41 = 2]	-.323	.055	34.961	1	.000	-.430	-.216
	[p4_41 = 3]	1.074	.060	322.428	1	.000	.957	1.191
Location	p12_14apn	.011	.006	3.705	1	.054	.000	.022
	p12_14dc	.021	.008	7.691	1	.006	.006	.036
	p12_14do	.013	.007	3.234	1	.072	-.001	.028
	p12_14md	-.011	.003	10.959	1	.001	-.017	-.004
	p12_14pa	.012	.006	3.967	1	.046	.000	.024

Link function: Logit.

Task #42

Warnings

There are 4763 (75.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_42	0	12	.6%
	1	136	6.9%
	2	469	23.7%
	3	729	36.9%
	4	630	31.9%
Valid		1976	100.0%
Missing		321	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4643.809	5027	1.000
Deviance	3426.520	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.010
Nagelkerke	.011
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_42 = 0]	-5.134	.291	310.594	1	.000	-5.705	-4.563
	[p4_42 = 1]	-2.543	.091	777.204	1	.000	-2.721	-2.364
	[p4_42 = 2]	-.809	.057	199.462	1	.000	-.921	-.697
	[p4_42 = 3]	.749	.057	173.914	1	.000	.638	.861
Location	p12_14apn	.008	.006	1.791	1	.181	-.004	.019
	p12_14dc	.005	.007	.548	1	.459	-.009	.019
	p12_14do	.025	.008	9.064	1	.003	.009	.041
	p12_14md	-.013	.003	16.150	1	.000	-.020	-.007
	p12_14pa	.007	.006	1.406	1	.236	-.005	.019

Link function: Logit.

Task #43

Warnings

There are 4817 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_43	0	9	.5%
	1	32	1.6%
	2	130	6.6%
	3	521	26.5%
	4	1271	64.7%
Valid		1963	100.0%
Missing		334	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4311.372	5011	1.000
Deviance	2321.244	5011	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_43 = 0]	-5.329	.336	251.839	1	.000	-5.987	-4.671
	[p4_43 = 1]	-3.796	.161	553.356	1	.000	-4.112	-3.480
	[p4_43 = 2]	-2.298	.087	699.730	1	.000	-2.468	-2.128
	[p4_43 = 3]	-.554	.059	89.462	1	.000	-.669	-.439
Location	p12_14apn	.002	.007	.066	1	.797	-.011	.015
	p12_14dc	-.002	.008	.043	1	.835	-.016	.013
	p12_14do	-.008	.008	.901	1	.343	-.024	.008
	p12_14md	.005	.004	1.690	1	.194	-.003	.013
	p12_14pa	.008	.008	1.050	1	.306	-.007	.023

Link function: Logit.

Task #44

Warnings

There are 4832 (77.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_44	0	5	.3%
	1	20	1.0%
	2	110	5.6%
	3	493	25.2%
	4	1327	67.9%
Valid		1955	100.0%
Missing		342	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4612.957	5003	1.000
Deviance	2147.482	5003	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_44 = 0]	-5.868	.449	170.652	1	.000	-6.749	-4.988
	[p4_44 = 1]	-4.249	.204	432.055	1	.000	-4.649	-3.848
	[p4_44 = 2]	-2.502	.096	678.988	1	.000	-2.691	-2.314
	[p4_44 = 3]	-.645	.061	111.687	1	.000	-.764	-.525
Location	p12_14apn	.004	.007	.301	1	.583	-.010	.018
	p12_14dc	.008	.009	.869	1	.351	-.009	.026
	p12_14do	.006	.011	.334	1	.564	-.015	.027
	p12_14md	.005	.004	1.263	1	.261	-.004	.013
	p12_14pa	.010	.008	1.448	1	.229	-.006	.026

Link function: Logit.

Task #45

Warnings

There are 4757 (75.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_45	0	8	.4%
	1	102	5.2%
	2	412	20.9%
	3	714	36.2%
	4	735	37.3%
Valid		1971	100.0%
Missing		326	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4515.182	5019	1.000
Deviance	3282.837	5019	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_45 = 0]	-5.493	.356	238.533	1	.000	-6.190	-4.796
	[p4_45 = 1]	-2.818	.103	751.105	1	.000	-3.019	-2.616
	[p4_45 = 2]	-1.005	.059	286.357	1	.000	-1.122	-.889
	[p4_45 = 3]	.542	.056	94.539	1	.000	.433	.652
Location	p12_14apn	.012	.006	4.053	1	.044	.000	.024
	p12_14dc	-.003	.007	.183	1	.669	-.016	.011
	p12_14do	.020	.008	5.741	1	.017	.004	.036
	p12_14md	-.006	.003	3.510	1	.061	-.013	.000
	p12_14pa	.002	.006	.126	1	.723	-.010	.014

Link function: Logit.

Task #46

Warnings

There are 4790 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_46	0	20	1.0%
	1	52	2.6%
	2	245	12.4%
	3	728	36.9%
	4	928	47.0%
Valid		1973	100.0%
Missing		324	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4562.978	5023	1.000
Deviance	2960.473	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_46 = 0]	-4.522	.227	397.462	1	.000	-4.967	-4.078
	[p4_46 = 1]	-3.214	.124	673.677	1	.000	-3.457	-2.971
	[p4_46 = 2]	-1.592	.068	539.965	1	.000	-1.726	-1.457
	[p4_46 = 3]	.186	.055	11.318	1	.001	.078	.294
Location	p12_14apn	.018	.007	6.068	1	.014	.004	.031
	p12_14dc	.001	.007	.027	1	.869	-.013	.015
	p12_14do	-.001	.008	.005	1	.943	-.016	.015
	p12_14md	.001	.003	.080	1	.778	-.006	.008
	p12_14pa	.005	.006	.705	1	.401	-.007	.018

Link function: Logit.

Task #47

Warnings

There are 4696 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_47	0	26	1.3%
	1	179	9.2%
	2	569	29.1%
	3	698	35.7%
	4	481	24.6%
Valid		1953	100.0%
Missing		344	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4697.376	4971	.997
Deviance	3554.244	4971	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_47 = 0]	-4.301	.200	463.569	1	.000	-4.692	-3.909
	[p4_47 = 1]	-2.136	.080	718.311	1	.000	-2.292	-1.979
	[p4_47 = 2]	-.406	.055	54.658	1	.000	-.513	-.298
	[p4_47 = 3]	1.140	.061	353.686	1	.000	1.021	1.259
Location	p12_14apn	.009	.006	2.816	1	.093	-.002	.021
	p12_14dc	.009	.007	1.775	1	.183	-.004	.023
	p12_14do	.009	.007	1.585	1	.208	-.005	.024
	p12_14md	-.009	.003	6.808	1	.009	-.015	-.002
	p12_14pa	.011	.006	3.349	1	.067	-.001	.023

Link function: Logit.

Task #48

Warnings

There are 4824 (76.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_48	0	24	1.2%
	1	42	2.1%
	2	189	9.6%
	3	557	28.2%
	4	1162	58.9%
Valid		1974	100.0%
Missing		323	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4966.079	5023	.713
Deviance	2750.648	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.010
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_48 = 0]	-4.305	.208	428.474	1	.000	-4.713	-3.898
	[p4_48 = 1]	-3.272	.129	639.160	1	.000	-3.525	-3.018
	[p4_48 = 2]	-1.813	.075	588.808	1	.000	-1.960	-1.667
	[p4_48 = 3]	-.254	.057	19.841	1	.000	-.366	-.143
Location	p12_14apn	.008	.007	1.333	1	.248	-.006	.022
	p12_14dc	-.009	.007	1.640	1	.200	-.023	.005
	p12_14do	-.003	.009	.130	1	.718	-.020	.014
	p12_14md	.012	.004	8.441	1	.004	.004	.020
	p12_14pa	.001	.007	.011	1	.918	-.013	.014

Link function: Logit.

Task #49

Warnings

There are 4848 (77.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_49	0	4	.2%
	1	16	.8%
	2	101	5.1%
	3	521	26.5%
	4	1325	67.4%
Valid		1967	100.0%
Missing		330	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4295.188	5015	1.000
Deviance	2126.922	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.011
Nagelkerke	.014
McFadden	.007

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_49 = 0]	-6.141	.502	149.588	1	.000	-7.125	-5.157
	[p4_49 = 1]	-4.523	.228	393.577	1	.000	-4.970	-4.076
	[p4_49 = 2]	-2.665	.101	696.258	1	.000	-2.863	-2.467
	[p4_49 = 3]	-.652	.061	114.323	1	.000	-.771	-.532
Location	p12_14apn	.036	.012	8.464	1	.004	.012	.060
	p12_14dc	-.015	.007	4.173	1	.041	-.029	-.001
	p12_14do	-.011	.009	1.526	1	.217	-.028	.006
	p12_14md	.002	.004	.221	1	.639	-.006	.010
	p12_14pa	.009	.008	1.199	1	.274	-.007	.024

Link function: Logit.

Task #50

Warnings

There are 4923 (78.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_50	0	2	.1%
	1	1	.1%
	2	31	1.6%
	3	300	15.3%
	4	1631	83.0%
Valid		1965	100.0%
Missing		332	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5224.696	5023	.023
Deviance	1336.894	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_50 = 0]	-6.839	.709	93.069	1	.000	-8.229	-5.450
	[p4_50 = 1]	-6.433	.580	123.196	1	.000	-7.569	-5.297
	[p4_50 = 2]	-3.989	.179	496.224	1	.000	-4.340	-3.638
	[p4_50 = 3]	-1.531	.076	408.201	1	.000	-1.680	-1.383
Location	p12_14apn	.013	.011	1.211	1	.271	-.010	.035
	p12_14dc	-.014	.008	2.996	1	.083	-.030	.002
	p12_14do	.004	.013	.094	1	.759	-.022	.030
	p12_14md	.004	.005	.496	1	.481	-.007	.014
	p12_14pa	.003	.010	.095	1	.758	-.016	.022

Link function: Logit.

Task #51

Warnings

There are 4791 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_51	0	4	.2%
	1	18	.9%
	2	133	6.8%
	3	558	28.6%
	4	1236	63.4%
Valid		1949	100.0%
Missing		348	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4730.278	4979	.994
Deviance	2295.290	4979	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_51 = 0]	-6.181	.502	151.823	1	.000	-7.164	-5.198
	[p4_51 = 1]	-4.467	.217	423.137	1	.000	-4.893	-4.042
	[p4_51 = 2]	-2.441	.090	729.438	1	.000	-2.619	-2.264
	[p4_51 = 3]	-.539	.058	86.522	1	.000	-.653	-.425
Location	p12_14apn	.005	.007	.497	1	.481	-.008	.018
	p12_14dc	-.012	.007	3.010	1	.083	-.027	.002
	p12_14do	-.006	.008	.590	1	.442	-.022	.010
	p12_14md	.001	.004	.042	1	.837	-.007	.008
	p12_14pa	.007	.007	.975	1	.323	-.007	.021

Link function: Logit.

Task #52

Warnings

There are 4807 (76.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_52	0	12	.6%
	1	45	2.3%
	2	282	14.3%
	3	687	34.9%
	4	944	47.9%
Valid		1970	100.0%
Missing		327	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4889.968	5019	.902
Deviance	3021.328	5019	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_52 = 0]	-5.086	.291	304.894	1	.000	-5.657	-4.515
	[p4_52 = 1]	-3.504	.138	644.466	1	.000	-3.775	-3.234
	[p4_52 = 2]	-1.559	.067	535.548	1	.000	-1.691	-1.427
	[p4_52 = 3]	.099	.055	3.273	1	.070	-.008	.207
Location	p12_14apn	.009	.006	2.242	1	.134	-.003	.021
	p12_14dc	-.003	.007	.143	1	.706	-.016	.011
	p12_14do	.008	.008	.914	1	.339	-.008	.023
	p12_14md	-.006	.003	3.130	1	.077	-.013	.001
	p12_14pa	.010	.007	2.424	1	.119	-.003	.023

Link function: Logit.

Task #53

Warnings

There are 4814 (76.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_53	0	3	.2%
	1	23	1.2%
	2	204	10.4%
	3	653	33.2%
	4	1085	55.1%
Valid		1968	100.0%
Missing		329	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4203.480	5015	1.000
Deviance	2605.931	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_53 = 0]	-6.485	.579	125.553	1	.000	-7.619	-5.350
	[p4_53 = 1]	-4.313	.200	464.026	1	.000	-4.705	-3.920
	[p4_53 = 2]	-2.019	.078	677.552	1	.000	-2.171	-1.867
	[p4_53 = 3]	-.195	.056	12.232	1	.000	-.305	-.086
Location	p12_14apn	.014	.007	3.916	1	.048	.000	.028
	p12_14dc	-.011	.007	2.457	1	.117	-.025	.003
	p12_14do	.008	.008	.841	1	.359	-.009	.024
	p12_14md	-.006	.004	3.336	1	.068	-.013	.000
	p12_14pa	.010	.007	2.132	1	.144	-.003	.024

Link function: Logit.

Task #54

Warnings

There are 4698 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_54	0	29	1.5%
	1	116	5.9%
	2	453	23.2%
	3	670	34.3%
	4	687	35.1%
Valid		1955	100.0%
Missing		342	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4819.441	4975	.942
Deviance	3408.920	4975	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_54 = 0]	-4.195	.190	489.283	1	.000	-4.567	-3.823
	[p4_54 = 1]	-2.522	.092	759.296	1	.000	-2.701	-2.342
	[p4_54 = 2]	-.813	.058	199.457	1	.000	-.925	-.700
	[p4_54 = 3]	.624	.056	123.573	1	.000	.514	.735
Location	p12_14apn	.012	.006	4.107	1	.043	.000	.024
	p12_14dc	.003	.007	.209	1	.647	-.010	.017
	p12_14do	.009	.008	1.372	1	.242	-.006	.024
	p12_14md	-.007	.003	4.782	1	.029	-.014	-.001
	p12_14pa	.007	.006	1.216	1	.270	-.005	.019

Link function: Logit.

Task #55

Warnings

There are 4710 (75.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_55	0	41	2.1%
	1	201	10.3%
	2	539	27.5%
	3	626	32.0%
	4	552	28.2%
Valid		1959	100.0%
Missing		338	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4906.512	4999	.822
Deviance	3691.192	4999	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.004
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_55 = 0]	-3.799	.160	561.212	1	.000	-4.113	-3.485
	[p4_55 = 1]	-1.911	.074	661.385	1	.000	-2.057	-1.765
	[p4_55 = 2]	-.360	.055	43.511	1	.000	-.467	-.253
	[p4_55 = 3]	.989	.059	283.412	1	.000	.874	1.105
Location	p12_14apn	-.001	.006	.012	1	.914	-.011	.010
	p12_14dc	-.007	.007	.976	1	.323	-.020	.007
	p12_14do	3.03E-005	.007	.000	1	.997	-.014	.015
	p12_14md	.007	.003	4.038	1	.044	.000	.013
	p12_14pa	.001	.006	.027	1	.870	-.011	.013

Link function: Logit.

Task #56

Warnings

There are 4743 (75.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_56	0	32	1.6%
	1	243	12.3%
	2	594	30.1%
	3	615	31.2%
	4	487	24.7%
Valid		1971	100.0%
Missing		326	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4901.042	5027	.896
Deviance	3739.112	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.001
Nagelkerke	.001
McFadden	.000

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_56 = 0]	-4.079	.180	510.807	1	.000	-4.433	-3.725
	[p4_56 = 1]	-1.794	.071	637.615	1	.000	-1.933	-1.655
	[p4_56 = 2]	-.212	.054	15.458	1	.000	-.318	-.106
	[p4_56 = 3]	1.140	.060	359.465	1	.000	1.023	1.258
Location	p12_14apn	.003	.006	.210	1	.647	-.008	.013
	p12_14dc	.002	.007	.093	1	.761	-.011	.015
	p12_14do	.005	.007	.492	1	.483	-.009	.020
	p12_14md	.000	.003	.008	1	.931	-.007	.006
	p12_14pa	.003	.006	.206	1	.650	-.009	.014

Link function: Logit.

Task #57

Warnings

There are 4755 (75.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_57	0	20	1.0%
	1	74	3.8%
	2	320	16.3%
	3	734	37.4%
	4	817	41.6%
Valid		1965	100.0%
Missing		332	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4555.198	5007	1.000
Deviance	3128.344	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_57 = 0]	-4.533	.227	399.521	1	.000	-4.977	-4.088
	[p4_57 = 1]	-2.946	.110	718.935	1	.000	-3.161	-2.730
	[p4_57 = 2]	-1.273	.063	408.079	1	.000	-1.397	-1.150
	[p4_57 = 3]	.393	.055	50.222	1	.000	.284	.502
Location	p12_14apn	.019	.007	7.522	1	.006	.005	.032
	p12_14dc	.005	.007	.398	1	.528	-.010	.019
	p12_14do	.005	.008	.425	1	.514	-.010	.020
	p12_14md	-.002	.003	.247	1	.619	-.008	.005
	p12_14pa	.002	.006	.129	1	.720	-.010	.014

Link function: Logit.

Task #58

Warnings

There are 4800 (76.6%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_58	0	12	.6%
	1	44	2.2%
	2	163	8.3%
	3	641	32.7%
	4	1103	56.2%
Valid		1963	100.0%
Missing		334	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4454.453	5007	1.000
Deviance	2649.011	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_58 = 0]	-5.022	.291	296.873	1	.000	-5.593	-4.450
	[p4_58 = 1]	-3.458	.139	615.539	1	.000	-3.731	-3.185
	[p4_58 = 2]	-2.003	.079	648.170	1	.000	-2.157	-1.849
	[p4_58 = 3]	-.170	.057	9.000	1	.003	-.281	-.059
Location	p12_14apn	.025	.009	7.803	1	.005	.007	.042
	p12_14dc	.007	.008	.788	1	.375	-.008	.022
	p12_14do	.000	.009	.003	1	.958	-.016	.017
	p12_14md	6.34E-005	.004	.000	1	.986	-.007	.007
	p12_14pa	.004	.007	.439	1	.508	-.009	.018

Link function: Logit.

Task #59

Warnings

There are 4730 (75.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_59	0	9	.5%
	1	73	3.7%
	2	382	19.6%
	3	700	35.9%
	4	786	40.3%
Valid		1950	100.0%
Missing		347	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4290.335	4983	1.000
Deviance	3108.308	4983	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_59 = 0]	-5.323	.335	251.866	1	.000	-5.981	-4.666
	[p4_59 = 1]	-3.075	.117	694.913	1	.000	-3.303	-2.846
	[p4_59 = 2]	-1.110	.061	329.819	1	.000	-1.229	-.990
	[p4_59 = 3]	.451	.056	65.242	1	.000	.342	.561
Location	p12_14apn	.009	.006	2.494	1	.114	-.002	.021
	p12_14dc	.009	.007	1.499	1	.221	-.005	.023
	p12_14do	.009	.008	1.275	1	.259	-.007	.026
	p12_14md	-.002	.003	.502	1	.478	-.009	.004
	p12_14pa	.007	.006	1.322	1	.250	-.005	.020

Link function: Logit.

Task #60

Warnings

There are 4708 (75.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_60	0	21	1.1%
	1	162	8.3%
	2	413	21.2%
	3	709	36.3%
	4	647	33.1%
Valid		1952	100.0%
Missing		345	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4895.600	4979	.798
Deviance	3453.638	4979	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.002
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_60 = 0]	-4.494	.221	412.360	1	.000	-4.928	-4.060
	[p4_60 = 1]	-2.241	.083	729.866	1	.000	-2.404	-2.078
	[p4_60 = 2]	-.793	.057	191.479	1	.000	-.906	-.681
	[p4_60 = 3]	.732	.057	165.873	1	.000	.621	.844
Location	p12_14apn	.004	.006	.452	1	.501	-.007	.015
	p12_14dc	.005	.007	.543	1	.461	-.009	.019
	p12_14do	.009	.008	1.323	1	.250	-.006	.024
	p12_14md	-.002	.003	.340	1	.560	-.008	.005
	p12_14pa	.004	.006	.361	1	.548	-.008	.016

Link function: Logit.

Task #61

Warnings

There are 4747 (75.6%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_61	0	20	1.0%
	1	111	5.6%
	2	353	17.9%
	3	748	38.0%
	4	738	37.5%
Valid		1970	100.0%
Missing		327	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4647.529	5015	1.000
Deviance	3261.886	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_61 = 0]	-4.521	.227	398.173	1	.000	-4.965	-4.077
	[p4_61 = 1]	-2.581	.095	739.984	1	.000	-2.767	-2.395
	[p4_61 = 2]	-1.059	.060	311.284	1	.000	-1.176	-.941
	[p4_61 = 3]	.580	.056	107.282	1	.000	.470	.690
Location	p12_14apn	-.006	.006	1.128	1	.288	-.017	.005
	p12_14dc	.002	.007	.093	1	.760	-.012	.016
	p12_14do	.008	.008	1.017	1	.313	-.008	.023
	p12_14md	.006	.003	2.685	1	.101	-.001	.012
	p12_14pa	.003	.006	.249	1	.618	-.009	.015

Link function: Logit.

Task #62

Warnings

There are 4752 (75.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_62	0	21	1.1%
	1	107	5.4%
	2	427	21.7%
	3	765	38.8%
	4	651	33.0%
Valid		1971	100.0%
Missing		326	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4712.444	5023	.999
Deviance	3325.914	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_62 = 0]	-4.470	.221	408.261	1	.000	-4.904	-4.037
	[p4_62 = 1]	-2.606	.096	740.294	1	.000	-2.794	-2.418
	[p4_62 = 2]	-.875	.058	227.214	1	.000	-.989	-.761
	[p4_62 = 3]	.773	.057	183.091	1	.000	.661	.885
Location	p12_14apn	.009	.006	2.365	1	.124	-.002	.020
	p12_14dc	.002	.007	.054	1	.816	-.012	.015
	p12_14do	.010	.008	1.587	1	.208	-.005	.025
	p12_14md	.003	.003	.699	1	.403	-.004	.009
	p12_14pa	-.001	.006	.014	1	.907	-.013	.011

Link function: Logit.

Task #63

Warnings

There are 4778 (76.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_63	0	11	.6%
	1	49	2.5%
	2	217	11.0%
	3	662	33.7%
	4	1026	52.2%
Valid		1965	100.0%
Missing		332	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4466.770	5015	1.000
Deviance	2742.929	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_63 = 0]	-5.114	.304	282.994	1	.000	-5.709	-4.518
	[p4_63 = 1]	-3.391	.135	633.843	1	.000	-3.655	-3.127
	[p4_63 = 2]	-1.740	.072	584.640	1	.000	-1.881	-1.599
	[p4_63 = 3]	-.017	.056	.090	1	.764	-.126	.092
Location	p12_14apn	.010	.007	2.079	1	.149	-.003	.023
	p12_14dc	-.003	.007	.239	1	.625	-.017	.010
	p12_14do	.004	.009	.251	1	.616	-.012	.021
	p12_14md	.004	.004	1.011	1	.315	-.003	.011
	p12_14pa	.004	.007	.422	1	.516	-.009	.017

Link function: Logit.

Task #64

Warnings

There are 4743 (75.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_64	0	20	1.0%
	1	133	6.8%
	2	491	25.0%
	3	743	37.9%
	4	575	29.3%
Valid		1962	100.0%
Missing		335	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4590.874	4999	1.000
Deviance	3467.380	4999	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_64 = 0]	-4.520	.227	398.101	1	.000	-4.964	-4.076
	[p4_64 = 1]	-2.413	.089	737.547	1	.000	-2.587	-2.239
	[p4_64 = 2]	-.657	.056	136.368	1	.000	-.768	-.547
	[p4_64 = 3]	.943	.059	259.514	1	.000	.828	1.057
Location	p12_14apn	.009	.006	2.523	1	.112	-.002	.020
	p12_14dc	.005	.007	.472	1	.492	-.009	.018
	p12_14do	-.001	.007	.008	1	.931	-.015	.014
	p12_14md	.001	.003	.041	1	.839	-.006	.007
	p12_14pa	.009	.006	2.008	1	.157	-.003	.021

Link function: Logit.

Task #65

Warnings

There are 4798 (76.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_65	0	7	.4%
	1	41	2.1%
	2	226	11.5%
	3	685	34.8%
	4	1011	51.3%
Valid		1970	100.0%
Missing		327	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4136.933	5019	1.000
Deviance	2748.115	5019	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_65 = 0]	-5.569	.380	214.887	1	.000	-6.314	-4.824
	[p4_65 = 1]	-3.622	.149	587.729	1	.000	-3.915	-3.329
	[p4_65 = 2]	-1.753	.072	588.438	1	.000	-1.894	-1.611
	[p4_65 = 3]	.026	.056	.212	1	.645	-.083	.135
Location	p12_14apn	.013	.007	3.417	1	.065	-.001	.027
	p12_14dc	-.010	.007	2.101	1	.147	-.024	.004
	p12_14do	.000	.008	.001	1	.970	-.016	.017
	p12_14md	.006	.004	2.957	1	.085	-.001	.014
	p12_14pa	.002	.007	.073	1	.787	-.011	.015

Link function: Logit.

Task #66

Warnings

There are 4835 (77.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_66	0	5	.3%
	1	16	.8%
	2	116	5.9%
	3	480	24.5%
	4	1344	68.5%
Valid		1961	100.0%
Missing		336	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4323.100	5007	1.000
Deviance	2082.434	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_66 = 0]	-5.883	.449	171.514	1	.000	-6.764	-5.003
	[p4_66 = 1]	-4.440	.222	398.942	1	.000	-4.876	-4.004
	[p4_66 = 2]	-2.502	.096	685.219	1	.000	-2.689	-2.314
	[p4_66 = 3]	-.686	.061	125.899	1	.000	-.805	-.566
Location	p12_14apn	.000	.007	.001	1	.982	-.014	.013
	p12_14dc	-.004	.008	.262	1	.609	-.019	.011
	p12_14do	.014	.012	1.300	1	.254	-.010	.037
	p12_14md	.010	.005	4.711	1	.030	.001	.019
	p12_14pa	-.003	.007	.203	1	.652	-.018	.011

Link function: Logit.

Task #67

Warnings

There are 4819 (76.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_67	0	5	.3%
	1	16	.8%
	2	114	5.8%
	3	530	27.1%
	4	1294	66.1%
Valid		1959	100.0%
Missing		338	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	3900.309	5007	1.000
Deviance	2116.371	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.010
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_67 = 0]	-5.866	.449	170.400	1	.000	-6.747	-4.985
	[p4_67 = 1]	-4.422	.222	396.164	1	.000	-4.857	-3.986
	[p4_67 = 2]	-2.498	.096	680.569	1	.000	-2.686	-2.310
	[p4_67 = 3]	-.552	.060	84.629	1	.000	-.670	-.434
Location	p12_14apn	.005	.007	.444	1	.505	-.010	.019
	p12_14dc	-.004	.008	.324	1	.569	-.019	.010
	p12_14do	-.012	.009	1.647	1	.199	-.029	.006
	p12_14md	.015	.005	10.170	1	.001	.006	.024
	p12_14pa	.003	.008	.113	1	.737	-.012	.017

Link function: Logit.

Task #68

Warnings

There are 4768 (76.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p4_68	0	14	.7%
	1	30	1.5%
	2	194	9.9%
	3	670	34.3%
	4	1043	53.5%
Valid		1951	100.0%
Missing		346	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4392.148	4987	1.000
Deviance	2635.637	4987	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p4_68 = 0]	-4.836	.270	320.577	1	.000	-5.365	-4.307
	[p4_68 = 1]	-3.675	.156	557.024	1	.000	-3.980	-3.370
	[p4_68 = 2]	-1.877	.076	607.380	1	.000	-2.026	-1.728
	[p4_68 = 3]	-.034	.057	.364	1	.546	-.145	.077
Location	p12_14apn	.016	.007	4.338	1	.037	.001	.030
	p12_14dc	.001	.007	.008	1	.927	-.014	.015
	p12_14do	.013	.010	1.948	1	.163	-.005	.032
	p12_14md	.002	.004	.444	1	.505	-.005	.010
	p12_14pa	.006	.007	.726	1	.394	-.008	.019

Link function: Logit.

Task #69

Warnings

There are 4860 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_69	0	44	2.2%
	1	28	1.4%
	2	128	6.4%
	3	498	25.1%
	4	1289	64.9%
Valid		1987	100.0%
Missing		310	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4638.723	5055	1.000
Deviance	2512.445	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_69 = 0]	-3.734	.156	570.785	1	.000	-4.041	-3.428
	[p5_69 = 1]	-3.227	.125	667.491	1	.000	-3.472	-2.982
	[p5_69 = 2]	-2.134	.082	674.281	1	.000	-2.296	-1.973
	[p5_69 = 3]	-.553	.059	88.507	1	.000	-.668	-.438
Location	p12_14apn	.028	.011	7.000	1	.008	.007	.048
	p12_14dc	-.005	.007	.498	1	.480	-.020	.009
	p12_14do	-.002	.009	.056	1	.813	-.019	.015
	p12_14md	.002	.004	.378	1	.538	-.005	.010
	p12_14pa	-.002	.007	.072	1	.788	-.015	.012

Link function: Logit.

Task #70

Warnings

There are 4781 (75.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_70	0	19	1.0%
	1	119	6.0%
	2	466	23.4%
	3	770	38.7%
	4	615	30.9%
Valid		1989	100.0%
Missing		308	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4769.841	5055	.998
Deviance	3400.420	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.002
Nagelkerke	.002
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_70 = 0]	-4.604	.232	392.827	1	.000	-5.060	-4.149
	[p5_70 = 1]	-2.559	.093	760.264	1	.000	-2.741	-2.377
	[p5_70 = 2]	-.791	.057	193.510	1	.000	-.902	-.679
	[p5_70 = 3]	.846	.057	218.072	1	.000	.733	.958
Location	p12_14apn	.009	.006	2.446	1	.118	-.002	.020
	p12_14dc	.009	.007	1.459	1	.227	-.005	.022
	p12_14do	-.004	.007	.261	1	.609	-.018	.011
	p12_14md	.002	.003	.230	1	.631	-.005	.008
	p12_14pa	.001	.006	.019	1	.890	-.011	.013

Link function: Logit.

Task #71

Warnings

There are 4764 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_71	0	44	2.2%
	1	97	4.9%
	2	355	18.0%
	3	669	33.9%
	4	810	41.0%
Valid		1975	100.0%
Missing		322	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4802.000	5043	.992
Deviance	3351.999	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_71 = 0]	-3.753	.155	582.901	1	.000	-4.058	-3.448
	[p5_71 = 1]	-2.535	.092	751.629	1	.000	-2.717	-2.354
	[p5_71 = 2]	-1.059	.060	310.298	1	.000	-1.177	-.941
	[p5_71 = 3]	.403	.055	52.964	1	.000	.294	.511
Location	p12_14apn	.021	.007	8.247	1	.004	.007	.035
	p12_14dc	.001	.007	.008	1	.927	-.013	.014
	p12_14do	-.013	.008	2.828	1	.093	-.027	.002
	p12_14md	.002	.003	.397	1	.529	-.005	.009
	p12_14pa	-.001	.006	.012	1	.913	-.013	.011

Link function: Logit.

Task #72

Warnings

There are 4887 (77.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_72	0	15	.8%
	1	16	.8%
	2	72	3.6%
	3	405	20.4%
	4	1478	74.4%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4129.336	5047	1.000
Deviance	1909.830	5047	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_72 = 0]	-4.783	.262	333.015	1	.000	-5.296	-4.269
	[p5_72 = 1]	-4.048	.185	478.457	1	.000	-4.411	-3.685
	[p5_72 = 2]	-2.808	.108	673.042	1	.000	-3.020	-2.596
	[p5_72 = 3]	-.965	.065	220.998	1	.000	-1.093	-.838
Location	p12_14apn	.025	.012	4.320	1	.038	.001	.048
	p12_14dc	.005	.009	.341	1	.559	-.013	.023
	p12_14do	-.008	.010	.684	1	.408	-.027	.011
	p12_14md	.007	.005	2.321	1	.128	-.002	.016
	p12_14pa	.001	.008	.014	1	.905	-.015	.017

Link function: Logit.

Task #73

Warnings

There are 4811 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_73	0	13	.7%
	1	47	2.4%
	2	237	12.0%
	3	717	36.2%
	4	966	48.8%
Valid		1980	100.0%
Missing		317	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4568.710	5043	1.000
Deviance	2877.540	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_73 = 0]	-4.983	.280	316.982	1	.000	-5.532	-4.435
	[p5_73 = 1]	-3.429	.135	648.665	1	.000	-3.693	-3.166
	[p5_73 = 2]	-1.697	.070	586.758	1	.000	-1.834	-1.559
	[p5_73 = 3]	.092	.055	2.831	1	.092	-.015	.200
Location	p12_14apn	.006	.006	.799	1	.371	-.007	.018
	p12_14dc	-.012	.007	2.750	1	.097	-.025	.002
	p12_14do	-.004	.008	.224	1	.636	-.019	.012
	p12_14md	.007	.004	4.028	1	.045	.000	.014
	p12_14pa	-.003	.006	.245	1	.621	-.015	.009

Link function: Logit.

Task #74

Warnings

There are 4789 (76.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_74	0	39	2.0%
	1	38	1.9%
	2	229	11.6%
	3	624	31.6%
	4	1042	52.8%
Valid		1972	100.0%
Missing		325	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4581.111	5031	1.000
Deviance	2901.689	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_74 = 0]	-3.829	.165	540.317	1	.000	-4.152	-3.506
	[p5_74 = 1]	-3.129	.120	675.597	1	.000	-3.365	-2.893
	[p5_74 = 2]	-1.619	.070	538.405	1	.000	-1.755	-1.482
	[p5_74 = 3]	-.033	.056	.339	1	.561	-.142	.077
Location	p12_14apn	.015	.007	4.374	1	.036	.001	.029
	p12_14dc	.008	.008	1.107	1	.293	-.007	.023
	p12_14do	.010	.009	1.183	1	.277	-.008	.027
	p12_14md	-.001	.004	.076	1	.782	-.008	.006
	p12_14pa	.008	.007	1.400	1	.237	-.005	.022

Link function: Logit.

Task #75

Warnings

There are 4795 (75.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_75	0	6	.3%
	1	48	2.4%
	2	311	15.7%
	3	730	36.9%
	4	886	44.7%
Valid		1981	100.0%
Missing		316	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4370.288	5043	1.000
Deviance	2950.428	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_75 = 0]	-5.765	.410	197.639	1	.000	-6.569	-4.962
	[p5_75 = 1]	-3.543	.141	628.322	1	.000	-3.820	-3.266
	[p5_75 = 2]	-1.455	.066	491.744	1	.000	-1.584	-1.326
	[p5_75 = 3]	.250	.055	20.594	1	.000	.142	.358
Location	p12_14apn	.020	.007	7.840	1	.005	.006	.034
	p12_14dc	.002	.007	.082	1	.775	-.012	.016
	p12_14do	.002	.008	.097	1	.755	-.013	.018
	p12_14md	-.002	.003	.477	1	.490	-.009	.004
	p12_14pa	.002	.006	.095	1	.757	-.010	.014

Link function: Logit.

Task #76

Warnings

There are 4768 (75.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_76	0	25	1.3%
	1	70	3.5%
	2	318	16.1%
	3	710	36.0%
	4	850	43.1%
Valid		1973	100.0%
Missing		324	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5027.814	5031	.510
Deviance	3143.349	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_76 = 0]	-4.325	.204	451.261	1	.000	-4.724	-3.926
	[p5_76 = 1]	-2.953	.109	728.410	1	.000	-3.168	-2.739
	[p5_76 = 2]	-1.296	.063	422.340	1	.000	-1.420	-1.173
	[p5_76 = 3]	.315	.055	32.796	1	.000	.207	.423
Location	p12_14apn	.015	.007	5.479	1	.019	.002	.028
	p12_14dc	.003	.007	.226	1	.635	-.011	.017
	p12_14do	.006	.008	.607	1	.436	-.009	.022
	p12_14md	-.003	.003	.693	1	.405	-.009	.004
	p12_14pa	.003	.006	.201	1	.654	-.009	.015

Link function: Logit.

Task #77

Warnings

There are 4794 (75.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_77	0	16	.8%
	1	90	4.6%
	2	291	14.7%
	3	679	34.3%
	4	902	45.6%
Valid		1978	100.0%
Missing		319	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4848.672	5043	.975
Deviance	3175.390	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.009
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_77 = 0]	-4.840	.253	364.601	1	.000	-5.337	-4.343
	[p5_77 = 1]	-2.896	.105	760.328	1	.000	-3.102	-2.691
	[p5_77 = 2]	-1.397	.064	471.192	1	.000	-1.523	-1.271
	[p5_77 = 3]	.170	.055	9.680	1	.002	.063	.277
Location	p12_14apn	.012	.006	3.673	1	.055	.000	.024
	p12_14dc	.011	.008	2.154	1	.142	-.004	.026
	p12_14do	.013	.008	2.657	1	.103	-.003	.029
	p12_14md	-.013	.003	13.903	1	.000	-.019	-.006
	p12_14pa	.009	.006	2.046	1	.153	-.003	.022

Link function: Logit.

Task #78

Warnings

There are 4817 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_78	0	10	.5%
	1	46	2.3%
	2	166	8.5%
	3	465	23.7%
	4	1274	65.0%
Valid		1961	100.0%
Missing		336	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4638.163	5007	1.000
Deviance	2514.398	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.001
Nagelkerke	.001
McFadden	.000

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_78 = 0]	-5.275	.319	273.711	1	.000	-5.900	-4.650
	[p5_78 = 1]	-3.528	.140	637.799	1	.000	-3.802	-3.255
	[p5_78 = 2]	-2.060	.079	683.668	1	.000	-2.215	-1.906
	[p5_78 = 3]	-.618	.058	113.792	1	.000	-.732	-.505
Location	p12_14apn	.002	.006	.057	1	.811	-.011	.014
	p12_14dc	.003	.008	.122	1	.726	-.013	.019
	p12_14do	.001	.008	.025	1	.874	-.015	.018
	p12_14md	.002	.004	.187	1	.666	-.006	.009
	p12_14pa	-.007	.006	1.289	1	.256	-.020	.005

Link function: Logit.

Task #79

Warnings

There are 4862 (76.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_79	0	8	.4%
	1	24	1.2%
	2	137	6.9%
	3	544	27.4%
	4	1270	64.0%
Valid		1983	100.0%
Missing		314	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5053.161	5047	.473
Deviance	2378.552	5047	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.022
McFadden	.010

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_79 = 0]	-5.387	.356	228.800	1	.000	-6.085	-4.689
	[p5_79 = 1]	-3.988	.182	480.799	1	.000	-4.344	-3.631
	[p5_79 = 2]	-2.247	.088	647.103	1	.000	-2.420	-2.074
	[p5_79 = 3]	-.436	.060	52.124	1	.000	-.555	-.318
Location	p12_14apn	.070	.016	19.249	1	.000	.039	.101
	p12_14dc	.001	.008	.035	1	.852	-.014	.017
	p12_14do	.007	.010	.464	1	.496	-.013	.027
	p12_14md	.000	.004	.007	1	.932	-.007	.008
	p12_14pa	-.001	.007	.007	1	.934	-.014	.013

Link function: Logit.

Task #80

Warnings

There are 4859 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_80	0	29	1.5%
	1	20	1.0%
	2	150	7.6%
	3	487	24.5%
	4	1299	65.4%
Valid		1985	100.0%
Missing		312	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4921.009	5051	.903
Deviance	2409.200	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.022
McFadden	.010

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_80 = 0]	-4.083	.191	457.794	1	.000	-4.457	-3.709
	[p5_80 = 1]	-3.547	.149	563.661	1	.000	-3.840	-3.254
	[p5_80 = 2]	-2.060	.084	607.141	1	.000	-2.224	-1.896
	[p5_80 = 3]	-.489	.061	63.948	1	.000	-.609	-.369
Location	p12_14apn	.057	.015	14.173	1	.000	.027	.087
	p12_14dc	-.005	.007	.518	1	.472	-.020	.009
	p12_14do	.020	.013	2.479	1	.115	-.005	.045
	p12_14md	.004	.004	1.152	1	.283	-.004	.013
	p12_14pa	-.007	.007	1.124	1	.289	-.021	.006

Link function: Logit.

Task #81

Warnings

There are 4812 (76.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_81	0	24	1.2%
	1	38	1.9%
	2	155	7.8%
	3	554	28.0%
	4	1211	61.1%
Valid		1982	100.0%
Missing		315	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4636.650	5039	1.000
Deviance	2500.539	5039	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.017
Nagelkerke	.019
McFadden	.009

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_81 = 0]	-4.262	.208	418.532	1	.000	-4.671	-3.854
	[p5_81 = 1]	-3.292	.134	607.198	1	.000	-3.554	-3.030
	[p5_81 = 2]	-1.950	.080	594.687	1	.000	-2.107	-1.793
	[p5_81 = 3]	-.291	.059	24.205	1	.000	-.407	-.175
Location	p12_14apn	.045	.013	12.208	1	.000	.020	.070
	p12_14dc	-.002	.007	.082	1	.775	-.017	.012
	p12_14do	.000	.010	.002	1	.962	-.018	.019
	p12_14md	.009	.004	5.023	1	.025	.001	.018
	p12_14pa	-.001	.007	.036	1	.849	-.015	.012

Link function: Logit.

Task #82

Warnings

There are 4808 (76.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_82	0	119	6.0%
	1	55	2.8%
	2	199	10.0%
	3	607	30.6%
	4	1006	50.7%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4959.943	5051	.817
Deviance	3269.148	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_82 = 0]	-2.687	.099	732.478	1	.000	-2.882	-2.493
	[p5_82 = 1]	-2.276	.085	717.322	1	.000	-2.443	-2.110
	[p5_82 = 2]	-1.394	.065	458.320	1	.000	-1.522	-1.267
	[p5_82 = 3]	.049	.055	.777	1	.378	-.059	.157
Location	p12_14apn	.005	.006	.695	1	.405	-.007	.018
	p12_14dc	-.010	.007	2.244	1	.134	-.024	.003
	p12_14do	-.004	.008	.222	1	.638	-.019	.012
	p12_14md	.008	.004	4.740	1	.029	.001	.015
	p12_14pa	.004	.007	.295	1	.587	-.009	.017

Link function: Logit.

Task #83

Warnings

There are 4829 (76.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_83	0	124	6.3%
	1	36	1.8%
	2	112	5.7%
	3	426	21.5%
	4	1282	64.7%
Valid		1980	100.0%
Missing		317	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4740.973	5043	.999
Deviance	2692.995	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.013
Nagelkerke	.014
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_83 = 0]	-2.602	.099	689.495	1	.000	-2.797	-2.408
	[p5_83 = 1]	-2.327	.090	674.870	1	.000	-2.502	-2.151
	[p5_83 = 2]	-1.729	.074	544.002	1	.000	-1.874	-1.583
	[p5_83 = 3]	-.490	.059	68.094	1	.000	-.606	-.373
Location	p12_14apn	.003	.007	.148	1	.701	-.011	.017
	p12_14dc	-.014	.007	4.202	1	.040	-.028	-.001
	p12_14do	-.012	.009	1.806	1	.179	-.030	.006
	p12_14md	.017	.005	12.851	1	.000	.008	.027
	p12_14pa	.004	.008	.272	1	.602	-.011	.019

Link function: Logit.

Task #84

Warnings

There are 4749 (75.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_84	0	231	11.6%
	1	120	6.1%
	2	361	18.2%
	3	611	30.8%
	4	660	33.3%
Valid		1983	100.0%
Missing		314	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5056.248	5059	.508
Deviance	3915.037	5059	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.010
Nagelkerke	.010
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_84 = 0]	-1.937	.076	655.848	1	.000	-2.085	-1.788
	[p5_84 = 1]	-1.446	.066	487.133	1	.000	-1.574	-1.317
	[p5_84 = 2]	-.485	.055	76.534	1	.000	-.593	-.376
	[p5_84 = 3]	.799	.057	195.073	1	.000	.687	.912
Location	p12_14apn	.023	.007	11.304	1	.001	.010	.036
	p12_14dc	.014	.007	3.842	1	.050	9.99E-007	.028
	p12_14do	.001	.008	.035	1	.851	-.013	.016
	p12_14md	.001	.003	.178	1	.673	-.005	.008
	p12_14pa	.005	.006	.646	1	.421	-.007	.017

Link function: Logit.

Task #85

Warnings

There are 4728 (75.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_85	0	295	15.0%
	1	199	10.1%
	2	503	25.6%
	3	519	26.4%
	4	452	23.0%
Valid		1968	100.0%
Missing		329	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5120.115	5031	.187
Deviance	4244.166	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_85 = 0]	-1.704	.069	602.377	1	.000	-1.840	-1.568
	[p5_85 = 1]	-1.061	.059	317.949	1	.000	-1.177	-.944
	[p5_85 = 2]	.065	.054	1.481	1	.224	-.040	.171
	[p5_85 = 3]	1.256	.062	415.485	1	.000	1.135	1.377
Location	p12_14apn	.018	.006	9.164	1	.002	.006	.029
	p12_14dc	.007	.007	.926	1	.336	-.007	.020
	p12_14do	.006	.007	.686	1	.408	-.008	.021
	p12_14md	-.005	.003	2.031	1	.154	-.011	.002
	p12_14pa	.005	.006	.834	1	.361	-.006	.017

Link function: Logit.

Task #86

Warnings

There are 4725 (74.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_86	0	295	14.9%
	1	158	8.0%
	2	445	22.5%
	3	575	29.1%
	4	505	25.5%
Valid		1978	100.0%
Missing		319	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5061.537	5047	.440
Deviance	4118.915	5047	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_86 = 0]	-1.670	.069	586.604	1	.000	-1.805	-1.535
	[p5_86 = 1]	-1.141	.060	356.699	1	.000	-1.260	-1.023
	[p5_86 = 2]	-.109	.054	4.086	1	.043	-.214	-.003
	[p5_86 = 3]	1.151	.060	366.239	1	.000	1.033	1.268
Location	p12_14apn	.012	.006	4.123	1	.042	.000	.023
	p12_14dc	.003	.007	.167	1	.682	-.011	.016
	p12_14do	-.007	.007	.906	1	.341	-.021	.007
	p12_14md	.004	.003	1.689	1	.194	-.002	.011
	p12_14pa	.007	.006	1.271	1	.260	-.005	.018

Link function: Logit.

Task #87

Warnings

There are 4748 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_87	0	256	13.0%
	1	80	4.1%
	2	234	11.9%
	3	494	25.1%
	4	908	46.0%
Valid		1972	100.0%
Missing		325	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4968.336	5027	.719
Deviance	3583.989	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.019
McFadden	.007

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_87 = 0]	-1.826	.074	613.639	1	.000	-1.971	-1.682
	[p5_87 = 1]	-1.504	.067	499.361	1	.000	-1.636	-1.372
	[p5_87 = 2]	-.815	.058	194.303	1	.000	-.930	-.701
	[p5_87 = 3]	.257	.055	21.422	1	.000	.148	.365
Location	p12_14apn	.003	.006	.258	1	.611	-.009	.015
	p12_14dc	-.020	.007	8.233	1	.004	-.033	-.006
	p12_14do	-.017	.008	4.633	1	.031	-.032	-.001
	p12_14md	.017	.004	19.058	1	.000	.009	.025
	p12_14pa	4.32E-005	.006	.000	1	.995	-.012	.013

Link function: Logit.

Task #88

Warnings

There are 4713 (74.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_88	0	411	20.9%
	1	146	7.4%
	2	356	18.1%
	3	506	25.7%
	4	551	28.0%
Valid		1970	100.0%
Missing		327	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5138.717	5031	.142
Deviance	4138.610	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.010
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_88 = 0]	-1.263	.062	409.871	1	.000	-1.385	-1.140
	[p5_88 = 1]	-.859	.058	221.351	1	.000	-.972	-.745
	[p5_88 = 2]	-.070	.054	1.661	1	.198	-.175	.036
	[p5_88 = 3]	1.031	.059	304.614	1	.000	.915	1.146
Location	p12_14apn	.018	.006	8.922	1	.003	.006	.030
	p12_14dc	.015	.007	4.405	1	.036	.001	.029
	p12_14do	-.006	.007	.771	1	.380	-.021	.008
	p12_14md	-.001	.003	.075	1	.784	-.007	.006
	p12_14pa	.012	.006	3.822	1	.051	-2.99E-005	.024

Link function: Logit.

Task #89

Warnings

There are 4469 (74.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_89	0	426	23.2%
	1	196	10.7%
	2	402	21.9%
	3	467	25.4%
	4	346	18.8%
Valid		1837	100.0%
Missing		460	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4856.314	4767	.180
Deviance	4039.489	4767	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_89 = 0]	-1.124	.063	323.489	1	.000	-1.247	-1.002
	[p5_89 = 1]	-.594	.057	106.637	1	.000	-.706	-.481
	[p5_89 = 2]	.312	.056	30.978	1	.000	.202	.422
	[p5_89 = 3]	1.548	.068	517.257	1	.000	1.415	1.682
Location	p12_14apn	.017	.006	7.984	1	.005	.005	.029
	p12_14dc	.004	.007	.325	1	.568	-.010	.018
	p12_14do	.000	.007	.000	1	.989	-.015	.014
	p12_14md	.000	.003	.014	1	.904	-.006	.007
	p12_14pa	.009	.006	2.379	1	.123	-.003	.021

Link function: Logit.

Task #90

Warnings

There are 4948 (78.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_90	0	9	.5%
	1	6	.3%
	2	24	1.2%
	3	251	12.6%
	4	1696	85.4%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4308.604	5051	1.000
Deviance	1269.125	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.012
McFadden	.007

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_90 = 0]	-5.301	.338	246.128	1	.000	-5.964	-4.639
	[p5_90 = 1]	-4.787	.264	328.696	1	.000	-5.305	-4.270
	[p5_90 = 2]	-3.819	.169	508.298	1	.000	-4.151	-3.487
	[p5_90 = 3]	-1.668	.081	421.384	1	.000	-1.828	-1.509
Location	p12_14apn	.050	.021	5.515	1	.019	.008	.092
	p12_14dc	-.010	.009	1.218	1	.270	-.027	.008
	p12_14do	-.015	.011	1.932	1	.165	-.037	.006
	p12_14md	.008	.006	1.860	1	.173	-.004	.020
	p12_14pa	-.003	.009	.089	1	.765	-.021	.016

Link function: Logit.

Task #91

Warnings

There are 4813 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_91	0	237	11.9%
	1	17	.9%
	2	105	5.3%
	3	437	22.0%
	4	1189	59.9%
Valid		1985	100.0%
Missing		312	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4675.655	5043	1.000
Deviance	2894.487	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.009
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_91 = 0]	-1.890	.077	609.303	1	.000	-2.040	-1.740
	[p5_91 = 1]	-1.811	.075	586.687	1	.000	-1.957	-1.664
	[p5_91 = 2]	-1.400	.067	436.424	1	.000	-1.531	-1.268
	[p5_91 = 3]	-.283	.057	24.497	1	.000	-.396	-.171
Location	p12_14apn	.010	.007	1.853	1	.173	-.004	.025
	p12_14dc	-.002	.007	.045	1	.831	-.016	.013
	p12_14do	-.001	.009	.027	1	.871	-.019	.016
	p12_14md	.010	.004	6.105	1	.013	.002	.018
	p12_14pa	.004	.007	.307	1	.580	-.010	.018

Link function: Logit.

Task #92

Warnings

There are 4727 (75.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_92	0	83	4.2%
	1	106	5.4%
	2	372	18.9%
	3	695	35.3%
	4	714	36.2%
Valid		1970	100.0%
Missing		327	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4917.263	5011	.825
Deviance	3561.286	5011	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_92 = 0]	-3.085	.116	708.843	1	.000	-3.312	-2.858
	[p5_92 = 1]	-2.203	.082	723.995	1	.000	-2.364	-2.043
	[p5_92 = 2]	-.878	.058	229.066	1	.000	-.992	-.764
	[p5_92 = 3]	.612	.056	119.412	1	.000	.502	.722
Location	p12_14apn	.012	.006	3.828	1	.050	-2.13E-005	.024
	p12_14dc	-.002	.007	.092	1	.762	-.016	.011
	p12_14do	-.008	.008	1.208	1	.272	-.023	.006
	p12_14md	.005	.003	2.483	1	.115	-.001	.012
	p12_14pa	-.003	.006	.264	1	.608	-.015	.009

Link function: Logit.

Task #93

Warnings

There are 4810 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_93	0	101	5.1%
	1	45	2.3%
	2	183	9.2%
	3	606	30.6%
	4	1047	52.8%
Valid		1982	100.0%
Missing		315	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4890.939	5043	.936
Deviance	3118.982	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.010
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_93 = 0]	-2.909	.107	734.884	1	.000	-3.119	-2.699
	[p5_93 = 1]	-2.514	.092	747.683	1	.000	-2.694	-2.334
	[p5_93 = 2]	-1.590	.068	543.426	1	.000	-1.724	-1.456
	[p5_93 = 3]	-.078	.055	1.995	1	.158	-.186	.030
Location	p12_14apn	-4.81E-005	.006	.000	1	.994	-.012	.012
	p12_14dc	-.026	.007	14.344	1	.000	-.040	-.013
	p12_14do	.001	.008	.009	1	.923	-.015	.017
	p12_14md	.008	.004	4.790	1	.029	.001	.015
	p12_14pa	-.003	.006	.160	1	.689	-.015	.010

Link function: Logit.

Task #94

Warnings

There are 4834 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p5_94	0	112	5.6%
	1	42	2.1%
	2	122	6.1%
	3	506	25.5%
	4	1202	60.6%
Valid		1984	100.0%
Missing		313	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4671.882	5051	1.000
Deviance	2821.231	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.019
Nagelkerke	.022
McFadden	.009

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p5_94 = 0]	-2.774	.104	714.197	1	.000	-2.977	-2.571
	[p5_94 = 1]	-2.430	.091	710.360	1	.000	-2.608	-2.251
	[p5_94 = 2]	-1.769	.074	578.267	1	.000	-1.913	-1.625
	[p5_94 = 3]	-.355	.058	38.203	1	.000	-.468	-.243
Location	p12_14apn	.006	.007	.731	1	.393	-.008	.020
	p12_14dc	-.032	.007	19.908	1	.000	-.046	-.018
	p12_14do	.006	.010	.386	1	.534	-.013	.026
	p12_14md	.015	.004	11.127	1	.001	.006	.023
	p12_14pa	-.011	.007	3.030	1	.082	-.024	.001

Link function: Logit.

Task #95

Warnings

There are 4705 (74.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_95	0	221	11.2%
	1	163	8.3%
	2	410	20.8%
	3	609	30.9%
	4	571	28.9%
Valid		1974	100.0%
Missing		323	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5050.046	5015	.361
Deviance	4052.426	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.009
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_95 = 0]	-2.027	.077	692.657	1	.000	-2.178	-1.876
	[p6_95 = 1]	-1.375	.064	464.580	1	.000	-1.500	-1.250
	[p6_95 = 2]	-.347	.054	40.544	1	.000	-.454	-.240
	[p6_95 = 3]	.956	.058	268.962	1	.000	.842	1.070
Location	p12_14apn	.021	.007	10.403	1	.001	.008	.034
	p12_14dc	.007	.007	.996	1	.318	-.007	.020
	p12_14do	-.006	.007	.638	1	.425	-.020	.009
	p12_14md	.005	.003	1.947	1	.163	-.002	.011
	p12_14pa	-.009	.006	2.407	1	.121	-.021	.002

Link function: Logit.

Task #96

Warnings

There are 4692 (74.7%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_96	0	282	14.3%
	1	249	12.6%
	2	528	26.8%
	3	488	24.7%
	4	425	21.6%
Valid		1972	100.0%
Missing		325	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5025.572	5015	.455
Deviance	4236.571	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_96 = 0]	-1.767	.070	629.206	1	.000	-1.905	-1.628
	[p6_96 = 1]	-.973	.058	278.420	1	.000	-1.087	-.859
	[p6_96 = 2]	.178	.054	11.012	1	.001	.073	.283
	[p6_96 = 3]	1.327	.062	452.257	1	.000	1.205	1.449
Location	p12_14apn	.014	.006	6.497	1	.011	.003	.026
	p12_14dc	.011	.007	2.280	1	.131	-.003	.024
	p12_14do	-.002	.007	.054	1	.816	-.016	.012
	p12_14md	.000	.003	.015	1	.902	-.006	.007
	p12_14pa	-.005	.006	.720	1	.396	-.016	.006

Link function: Logit.

Task #97

Warnings

There are 4719 (74.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_97	0	231	11.7%
	1	185	9.3%
	2	453	22.9%
	3	596	30.1%
	4	516	26.0%
Valid		1981	100.0%
Missing		316	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5019.755	5035	.558
Deviance	4116.853	5035	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_97 = 0]	-1.983	.076	689.661	1	.000	-2.131	-1.835
	[p6_97 = 1]	-1.282	.062	426.711	1	.000	-1.403	-1.160
	[p6_97 = 2]	-.199	.054	13.774	1	.000	-.305	-.094
	[p6_97 = 3]	1.096	.059	339.843	1	.000	.979	1.212
Location	p12_14apn	.008	.006	2.219	1	.136	-.003	.019
	p12_14dc	.002	.007	.111	1	.739	-.011	.016
	p12_14do	-.005	.007	.452	1	.501	-.019	.009
	p12_14md	.007	.003	4.632	1	.031	.001	.013
	p12_14pa	-.008	.006	1.833	1	.176	-.019	.004

Link function: Logit.

Task #98

Warnings

There are 4729 (75.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_98	0	215	10.9%
	1	95	4.8%
	2	226	11.5%
	3	505	25.7%
	4	927	47.1%
Valid		1968	100.0%
Missing		329	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4874.139	5015	.921
Deviance	3513.602	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.025
Nagelkerke	.027
McFadden	.010

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_98 = 0]	-2.028	.079	658.974	1	.000	-2.183	-1.873
	[p6_98 = 1]	-1.602	.069	531.519	1	.000	-1.738	-1.466
	[p6_98 = 2]	-.897	.060	226.566	1	.000	-1.014	-.780
	[p6_98 = 3]	.223	.056	16.006	1	.000	.114	.332
Location	p12_14apn	.002	.006	.077	1	.782	-.010	.014
	p12_14dc	-.021	.007	9.647	1	.002	-.035	-.008
	p12_14do	-.019	.008	5.916	1	.015	-.035	-.004
	p12_14md	.023	.004	28.945	1	.000	.014	.031
	p12_14pa	-.009	.006	2.056	1	.152	-.021	.003

Link function: Logit.

Task #99

Warnings

There are 4655 (74.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_99	0	360	18.4%
	1	164	8.4%
	2	385	19.7%
	3	509	26.0%
	4	538	27.5%
Valid		1956	100.0%
Missing		341	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5114.156	4967	.071
Deviance	4167.159	4967	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_99 = 0]	-1.439	.065	490.387	1	.000	-1.566	-1.311
	[p6_99 = 1]	-.954	.059	265.180	1	.000	-1.069	-.839
	[p6_99 = 2]	-.088	.054	2.672	1	.102	-.194	.018
	[p6_99 = 3]	1.029	.059	302.902	1	.000	.913	1.144
Location	p12_14apn	.020	.006	9.683	1	.002	.007	.033
	p12_14dc	.010	.007	1.975	1	.160	-.004	.023
	p12_14do	.000	.007	.002	1	.961	-.015	.014
	p12_14md	.001	.003	.143	1	.705	-.005	.008
	p12_14pa	-.003	.006	.302	1	.583	-.015	.008

Link function: Logit.

Task #100

Warnings

There are 4523 (74.6%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_100	0	345	18.4%
	1	228	12.1%
	2	429	22.8%
	3	465	24.8%
	4	411	21.9%
Valid		1878	100.0%
Missing		419	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4860.210	4839	.412
Deviance	4137.348	4839	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_100 = 0]	-1.461	.066	484.347	1	.000	-1.591	-1.330
	[p6_100 = 1]	-.791	.058	185.597	1	.000	-.905	-.678
	[p6_100 = 2]	.168	.055	9.296	1	.002	.060	.276
	[p6_100 = 3]	1.308	.064	422.207	1	.000	1.184	1.433
Location	p12_14apn	.009	.006	2.557	1	.110	-.002	.021
	p12_14dc	.006	.007	.651	1	.420	-.008	.020
	p12_14do	-.002	.007	.074	1	.785	-.016	.012
	p12_14md	.003	.003	.695	1	.405	-.004	.009
	p12_14pa	-.005	.006	.598	1	.439	-.016	.007

Link function: Logit.

Task #101

Warnings

There are 4739 (75.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_101	0	116	5.9%
	1	84	4.3%
	2	175	8.9%
	3	540	27.6%
	4	1044	53.3%
Valid		1959	100.0%
Missing		338	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4945.623	4987	.659
Deviance	3223.302	4987	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.003
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_101 = 0]	-2.769	.101	753.497	1	.000	-2.967	-2.571
	[p6_101 = 1]	-2.178	.081	721.573	1	.000	-2.337	-2.019
	[p6_101 = 2]	-1.443	.065	485.483	1	.000	-1.571	-1.314
	[p6_101 = 3]	-.130	.055	5.569	1	.018	-.238	-.022
Location	p12_14apn	.010	.007	2.013	1	.156	-.004	.023
	p12_14dc	-.009	.007	1.590	1	.207	-.023	.005
	p12_14do	-.009	.008	1.513	1	.219	-.024	.006
	p12_14md	.001	.003	.105	1	.746	-.006	.008
	p12_14pa	.000	.006	.006	1	.941	-.012	.013

Link function: Logit.

Task #102

Warnings

There are 4754 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_102	0	77	4.0%
	1	44	2.3%
	2	160	8.2%
	3	578	29.7%
	4	1089	55.9%
Valid		1948	100.0%
Missing		349	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4752.285	4971	.987
Deviance	2888.959	4971	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_102 = 0]	-3.132	.121	670.114	1	.000	-3.369	-2.895
	[p6_102 = 1]	-2.655	.100	710.201	1	.000	-2.850	-2.460
	[p6_102 = 2]	-1.719	.073	560.226	1	.000	-1.861	-1.577
	[p6_102 = 3]	-.168	.057	8.719	1	.003	-.280	-.057
Location	p12_14apn	.006	.007	.664	1	.415	-.008	.019
	p12_14dc	-.015	.007	4.778	1	.029	-.029	-.002
	p12_14do	-.001	.010	.006	1	.937	-.019	.018
	p12_14md	.009	.004	5.448	1	.020	.001	.017
	p12_14pa	.000	.007	.000	1	.986	-.013	.013

Link function: Logit.

Task #103

Warnings

There are 4807 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_103	0	185	9.3%
	1	53	2.7%
	2	119	6.0%
	3	383	19.3%
	4	1241	62.6%
Valid		1981	100.0%
Missing		316	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5016.911	5027	.537
Deviance	2977.932	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_103 = 0]	-2.242	.084	712.972	1	.000	-2.407	-2.078
	[p6_103 = 1]	-1.960	.077	654.993	1	.000	-2.110	-1.810
	[p6_103 = 2]	-1.483	.067	487.866	1	.000	-1.614	-1.351
	[p6_103 = 3]	-.482	.057	71.097	1	.000	-.594	-.370
Location	p12_14apn	-.003	.006	.317	1	.574	-.015	.009
	p12_14dc	-.013	.007	3.237	1	.072	-.026	.001
	p12_14do	.002	.009	.066	1	.797	-.015	.020
	p12_14md	.008	.004	3.799	1	.051	-4.33E-005	.016
	p12_14pa	-.004	.007	.298	1	.585	-.017	.009

Link function: Logit.

Task #104

Warnings

There are 4802 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_104	0	237	12.0%
	1	39	2.0%
	2	113	5.7%
	3	375	18.9%
	4	1215	61.4%
Valid		1979	100.0%
Missing		318	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4945.753	5031	.802
Deviance	2964.895	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_104 = 0]	-1.957	.077	653.842	1	.000	-2.107	-1.807
	[p6_104 = 1]	-1.782	.073	601.911	1	.000	-1.924	-1.639
	[p6_104 = 2]	-1.369	.065	439.396	1	.000	-1.497	-1.241
	[p6_104 = 3]	-.421	.057	55.064	1	.000	-.532	-.310
Location	p12_14apn	-.005	.006	.566	1	.452	-.016	.007
	p12_14dc	-.008	.007	1.214	1	.270	-.022	.006
	p12_14do	.002	.009	.051	1	.821	-.015	.019
	p12_14md	.010	.004	5.698	1	.017	.002	.017
	p12_14pa	-.007	.006	1.031	1	.310	-.019	.006

Link function: Logit.

Task #105

Warnings

There are 4728 (75.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_105	0	445	22.5%
	1	87	4.4%
	2	213	10.8%
	3	444	22.5%
	4	786	39.8%
Valid		1975	100.0%
Missing		322	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5224.590	5023	.023
Deviance	3791.685	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.015
Nagelkerke	.016
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_105 = 0]	-1.152	.061	352.284	1	.000	-1.272	-1.032
	[p6_105 = 1]	-.913	.059	242.174	1	.000	-1.029	-.798
	[p6_105 = 2]	-.413	.055	55.856	1	.000	-.521	-.305
	[p6_105 = 3]	.514	.056	85.514	1	.000	.405	.623
Location	p12_14apn	-.011	.006	3.647	1	.056	-.022	.000
	p12_14dc	.004	.007	.321	1	.571	-.010	.018
	p12_14do	.007	.008	.728	1	.394	-.009	.023
	p12_14md	.017	.004	20.063	1	.000	.009	.024
	p12_14pa	-.013	.006	4.230	1	.040	-.025	-.001

Link function: Logit.

Task #106

Warnings

There are 4653 (75.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_106	0	625	32.2%
	1	86	4.4%
	2	238	12.3%
	3	364	18.8%
	4	627	32.3%
Valid		1940	100.0%
Missing		357	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5072.706	4955	.119
Deviance	3788.019	4955	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.019
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_106 = 0]	-.652	.057	131.839	1	.000	-.763	-.541
	[p6_106 = 1]	-.454	.056	66.550	1	.000	-.563	-.345
	[p6_106 = 2]	.056	.055	1.067	1	.302	-.051	.163
	[p6_106 = 3]	.851	.058	215.260	1	.000	.738	.965
Location	p12_14apn	-.014	.006	5.793	1	.016	-.025	-.003
	p12_14dc	.004	.007	.265	1	.607	-.010	.017
	p12_14do	.006	.008	.501	1	.479	-.010	.021
	p12_14md	.017	.004	22.898	1	.000	.010	.024
	p12_14pa	-.009	.006	2.088	1	.148	-.021	.003

Link function: Logit.

Task #107

Warnings

There are 4776 (76.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_107	0	409	20.7%
	1	48	2.4%
	2	102	5.2%
	3	353	17.9%
	4	1061	53.8%
Valid		1973	100.0%
Missing		324	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5271.051	5019	.007
Deviance	3311.160	5019	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_107 = 0]	-1.252	.064	386.466	1	.000	-1.377	-1.127
	[p6_107 = 1]	-1.109	.062	321.613	1	.000	-1.230	-.988
	[p6_107 = 2]	-.837	.059	200.731	1	.000	-.953	-.721
	[p6_107 = 3]	-.055	.056	.995	1	.318	-.165	.054
Location	p12_14apn	.009	.007	1.684	1	.194	-.004	.022
	p12_14dc	.002	.007	.051	1	.820	-.013	.016
	p12_14do	-.006	.008	.475	1	.491	-.022	.010
	p12_14md	.012	.004	9.571	1	.002	.004	.020
	p12_14pa	-.006	.006	.816	1	.366	-.018	.007

Link function: Logit.

Task #108

Warnings

There are 4753 (75.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_108	0	409	20.8%
	1	44	2.2%
	2	96	4.9%
	3	353	18.0%
	4	1064	54.1%
Valid		1966	100.0%
Missing		331	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5229.863	4999	.011
Deviance	3240.911	4999	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_108 = 0]	-1.245	.064	380.283	1	.000	-1.370	-1.119
	[p6_108 = 1]	-1.113	.062	321.008	1	.000	-1.235	-.991
	[p6_108 = 2]	-.854	.059	206.589	1	.000	-.971	-.738
	[p6_108 = 3]	-.067	.056	1.448	1	.229	-.177	.042
Location	p12_14apn	.012	.007	2.753	1	.097	-.002	.026
	p12_14dc	.001	.007	.032	1	.858	-.013	.015
	p12_14do	-.003	.008	.109	1	.742	-.019	.014
	p12_14md	.010	.004	7.099	1	.008	.003	.018
	p12_14pa	-.004	.006	.392	1	.531	-.017	.009

Link function: Logit.

Task 109

Warnings

There are 4843 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_109	0	39	2.0%
	1	31	1.6%
	2	111	5.6%
	3	497	25.1%
	4	1305	65.8%
Valid		1983	100.0%
Missing		314	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4848.024	5039	.973
Deviance	2438.844	5039	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_109 = 0]	-3.883	.166	549.203	1	.000	-4.208	-3.558
	[p6_109 = 1]	-3.281	.127	668.616	1	.000	-3.530	-3.033
	[p6_109 = 2]	-2.270	.086	699.800	1	.000	-2.438	-2.102
	[p6_109 = 3]	-.619	.059	109.153	1	.000	-.735	-.503
Location	p12_14apn	.019	.009	4.397	1	.036	.001	.036
	p12_14dc	-.014	.007	3.951	1	.047	-.028	.000
	p12_14do	.005	.009	.349	1	.555	-.013	.024
	p12_14md	-.004	.004	1.147	1	.284	-.011	.003
	p12_14pa	.012	.008	2.395	1	.122	-.003	.028

Link function: Logit.

Task #110

Warnings

There are 4825 (76.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_110	0	32	1.6%
	1	40	2.0%
	2	130	6.6%
	3	529	26.7%
	4	1250	63.1%
Valid		1981	100.0%
Missing		316	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4875.820	5035	.945
Deviance	2555.558	5035	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.014
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_110 = 0]	-4.086	.182	506.267	1	.000	-4.442	-3.730
	[p6_110 = 1]	-3.254	.125	675.603	1	.000	-3.499	-3.008
	[p6_110 = 2]	-2.148	.082	685.240	1	.000	-2.309	-1.988
	[p6_110 = 3]	-.496	.058	73.328	1	.000	-.610	-.383
Location	p12_14apn	.025	.010	6.405	1	.011	.006	.044
	p12_14dc	-.021	.007	8.637	1	.003	-.034	-.007
	p12_14do	-.013	.008	2.458	1	.117	-.029	.003
	p12_14md	.008	.004	3.500	1	.061	.000	.015
	p12_14pa	-.007	.007	1.002	1	.317	-.019	.006

Link function: Logit.

Task #111

Warnings

There are 4785 (76.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_111	0	52	2.6%
	1	49	2.5%
	2	210	10.6%
	3	574	29.0%
	4	1091	55.2%
Valid		1976	100.0%
Missing		321	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4882.157	5023	.921
Deviance	2963.012	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_111 = 0]	-3.560	.144	610.508	1	.000	-3.842	-3.277
	[p6_111 = 1]	-2.870	.107	719.775	1	.000	-3.080	-2.660
	[p6_111 = 2]	-1.625	.070	545.938	1	.000	-1.761	-1.488
	[p6_111 = 3]	-.152	.056	7.359	1	.007	-.261	-.042
Location	p12_14apn	.016	.008	4.656	1	.031	.002	.031
	p12_14dc	-.006	.007	.610	1	.435	-.019	.008
	p12_14do	-.005	.008	.452	1	.501	-.021	.010
	p12_14md	.002	.004	.186	1	.666	-.006	.009
	p12_14pa	.008	.007	1.401	1	.237	-.005	.022

Link function: Logit.

Task #112

Warnings

There are 4733 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_112	0	225	11.4%
	1	114	5.8%
	2	293	14.9%
	3	590	30.0%
	4	746	37.9%
Valid		1968	100.0%
Missing		329	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5168.605	5015	.064
Deviance	3897.977	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_112 = 0]	-2.009	.077	687.710	1	.000	-2.159	-1.859
	[p6_112 = 1]	-1.530	.066	530.126	1	.000	-1.661	-1.400
	[p6_112 = 2]	-.708	.057	156.366	1	.000	-.818	-.597
	[p6_112 = 3]	.537	.056	93.700	1	.000	.429	.646
Location	p12_14apn	.012	.006	3.734	1	.053	.000	.023
	p12_14dc	.010	.007	2.070	1	.150	-.004	.025
	p12_14do	.005	.008	.427	1	.513	-.010	.020
	p12_14md	-.003	.003	.607	1	.436	-.009	.004
	p12_14pa	.004	.006	.524	1	.469	-.007	.016

Link function: Logit.

Task #113

Warnings

There are 4697 (75.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_113	0	293	14.9%
	1	111	5.6%
	2	328	16.7%
	3	560	28.4%
	4	677	34.4%
Valid		1969	100.0%
Missing		328	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5107.241	4995	.131
Deviance	3986.396	4995	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.004
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_113 = 0]	-1.731	.070	615.239	1	.000	-1.868	-1.594
	[p6_113 = 1]	-1.341	.063	452.320	1	.000	-1.464	-1.217
	[p6_113 = 2]	-.509	.055	85.366	1	.000	-.617	-.401
	[p6_113 = 3]	.665	.056	141.094	1	.000	.555	.775
Location	p12_14apn	.011	.006	3.536	1	.060	.000	.022
	p12_14dc	.008	.007	1.235	1	.266	-.006	.022
	p12_14do	-.001	.008	.019	1	.889	-.017	.014
	p12_14md	-.004	.003	1.762	1	.184	-.011	.002
	p12_14pa	.007	.006	1.233	1	.267	-.005	.019

Link function: Logit.

Task #114

Warnings

There are 4746 (75.3%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_114	0	174	8.8%
	1	61	3.1%
	2	226	11.4%
	3	598	30.3%
	4	917	46.4%
Valid		1976	100.0%
Missing		321	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5017.329	5031	.552
Deviance	3408.725	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.004
Nagelkerke	.004
McFadden	.001

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_114 = 0]	-2.284	.085	725.240	1	.000	-2.451	-2.118
	[p6_114 = 1]	-1.949	.076	663.376	1	.000	-2.098	-1.801
	[p6_114 = 2]	-1.136	.061	344.368	1	.000	-1.256	-1.016
	[p6_114 = 3]	.201	.055	13.429	1	.000	.094	.309
Location	p12_14apn	.016	.007	5.429	1	.020	.003	.029
	p12_14dc	.001	.007	.007	1	.936	-.013	.014
	p12_14do	-.001	.008	.022	1	.882	-.016	.014
	p12_14md	.002	.003	.253	1	.615	-.005	.008
	p12_14pa	.003	.006	.178	1	.673	-.010	.015

Link function: Logit.

Task #115

Warnings

There are 4767 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_115	0	109	5.5%
	1	45	2.3%
	2	123	6.3%
	3	524	26.6%
	4	1167	59.3%
Valid		1968	100.0%
Missing		329	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4877.556	4999	.888
Deviance	2845.262	4999	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_115 = 0]	-2.800	.104	725.446	1	.000	-3.004	-2.596
	[p6_115 = 1]	-2.430	.090	725.462	1	.000	-2.606	-2.253
	[p6_115 = 2]	-1.771	.073	592.791	1	.000	-1.914	-1.629
	[p6_115 = 3]	-.333	.057	34.432	1	.000	-.445	-.222
Location	p12_14apn	.024	.009	7.220	1	.007	.007	.042
	p12_14dc	-.003	.007	.176	1	.674	-.017	.011
	p12_14do	.000	.008	.001	1	.979	-.016	.017
	p12_14md	.000	.004	.018	1	.893	-.008	.007
	p12_14pa	.000	.007	.000	1	.983	-.013	.013

Link function: Logit.

Task #116

Warnings

There are 4783 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_116	0	290	14.7%
	1	26	1.3%
	2	75	3.8%
	3	383	19.4%
	4	1198	60.8%
Valid		1972	100.0%
Missing		325	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5222.380	5015	.020
Deviance	2876.813	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.006
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_116 = 0]	-1.697	.072	559.255	1	.000	-1.838	-1.557
	[p6_116 = 1]	-1.596	.070	521.872	1	.000	-1.733	-1.459
	[p6_116 = 2]	-1.336	.066	414.300	1	.000	-1.465	-1.207
	[p6_116 = 3]	-.372	.057	42.169	1	.000	-.485	-.260
Location	p12_14apn	.025	.009	7.043	1	.008	.006	.043
	p12_14dc	.004	.008	.254	1	.614	-.011	.019
	p12_14do	.004	.009	.237	1	.627	-.013	.022
	p12_14md	.000	.004	.012	1	.911	-.008	.007
	p12_14pa	.001	.007	.017	1	.896	-.012	.014

Link function: Logit.

Task #117

Warnings

There are 4733 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_117	0	374	19.0%
	1	47	2.4%
	2	159	8.1%
	3	436	22.1%
	4	957	48.5%
Valid		1973	100.0%
Missing		324	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4983.416	5015	.621
Deviance	3410.768	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_117 = 0]	-1.377	.065	450.594	1	.000	-1.504	-1.250
	[p6_117 = 1]	-1.228	.063	383.523	1	.000	-1.351	-1.105
	[p6_117 = 2]	-.798	.058	188.788	1	.000	-.912	-.685
	[p6_117 = 3]	.141	.055	6.524	1	.011	.033	.249
Location	p12_14apn	.010	.006	2.371	1	.124	-.003	.022
	p12_14dc	.014	.008	3.225	1	.073	-.001	.030
	p12_14do	.005	.008	.348	1	.555	-.011	.021
	p12_14md	.001	.003	.089	1	.766	-.006	.008
	p12_14pa	.006	.006	.892	1	.345	-.007	.019

Link function: Logit.

Task #118

Warnings

There are 4760 (76.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_118	0	285	14.5%
	1	22	1.1%
	2	77	3.9%
	3	368	18.7%
	4	1212	61.7%
Valid		1964	100.0%
Missing		333	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5049.842	4987	.263
Deviance	2801.769	4987	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.007
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_118 = 0]	-1.671	.072	533.119	1	.000	-1.813	-1.529
	[p6_118 = 1]	-1.583	.071	501.452	1	.000	-1.722	-1.445
	[p6_118 = 2]	-1.311	.066	391.450	1	.000	-1.441	-1.181
	[p6_118 = 3]	-.370	.058	40.423	1	.000	-.484	-.256
Location	p12_14apn	.012	.008	2.695	1	.101	-.002	.027
	p12_14dc	.017	.009	3.076	1	.079	-.002	.035
	p12_14do	.006	.009	.356	1	.551	-.013	.024
	p12_14md	.000	.004	.009	1	.926	-.007	.008
	p12_14pa	.014	.008	3.065	1	.080	-.002	.030

Link function: Logit.

Task #119

Warnings

There are 4692 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_119	0	424	21.7%
	1	82	4.2%
	2	167	8.6%
	3	393	20.1%
	4	887	45.4%
Valid		1953	100.0%
Missing		344	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5014.727	4971	.329
Deviance	3607.410	4971	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_119 = 0]	-1.188	.062	361.612	1	.000	-1.310	-1.065
	[p6_119 = 1]	-.955	.060	255.447	1	.000	-1.072	-.838
	[p6_119 = 2]	-.545	.057	92.903	1	.000	-.656	-.434
	[p6_119 = 3]	.285	.055	26.463	1	.000	.177	.394
Location	p12_14apn	.010	.006	2.318	1	.128	-.003	.022
	p12_14dc	.015	.008	3.634	1	.057	.000	.030
	p12_14do	.000	.008	.001	1	.970	-.016	.015
	p12_14md	.004	.003	1.542	1	.214	-.002	.011
	p12_14pa	.006	.006	.992	1	.319	-.006	.019

Link function: Logit.

Task #120

Warnings

There are 4882 (77.6%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p6_120	0	29	1.5%
	1	14	.7%
	2	59	3.0%
	3	342	17.3%
	4	1532	77.5%
Valid		1976	100.0%
Missing		321	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5228.684	5023	.021
Deviance	1815.123	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.016
McFadden	.008

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p6_120 = 0]	-4.073	.192	449.806	1	.000	-4.450	-3.697
	[p6_120 = 1]	-3.672	.160	525.160	1	.000	-3.986	-3.358
	[p6_120 = 2]	-2.776	.111	629.058	1	.000	-2.993	-2.559
	[p6_120 = 3]	-1.093	.070	245.337	1	.000	-1.229	-.956
Location	p12_14apn	.011	.010	1.062	1	.303	-.010	.031
	p12_14dc	-.016	.008	4.576	1	.032	-.031	-.001
	p12_14do	-.003	.012	.049	1	.825	-.027	.021
	p12_14md	.017	.006	7.751	1	.005	.005	.029
	p12_14pa	.007	.010	.512	1	.474	-.012	.027

Link function: Logit.

Task #121

Warnings

There are 4761 (75.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_121	0	200	10.1%
	1	59	3.0%
	2	229	11.5%
	3	552	27.8%
	4	945	47.6%
Valid		1985	100.0%
Missing		312	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4938.553	5039	.842
Deviance	3456.249	5039	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_121 = 0]	-2.106	.080	686.659	1	.000	-2.264	-1.949
	[p7_121 = 1]	-1.813	.073	614.694	1	.000	-1.956	-1.670
	[p7_121 = 2]	-1.035	.060	292.644	1	.000	-1.153	-.916
	[p7_121 = 3]	.186	.055	11.363	1	.001	.078	.295
Location	p12_14apn	.000	.006	.004	1	.951	-.011	.012
	p12_14dc	.005	.007	.486	1	.486	-.009	.019
	p12_14do	-.006	.008	.571	1	.450	-.022	.010
	p12_14md	.011	.004	9.211	1	.002	.004	.018
	p12_14pa	-.001	.006	.038	1	.846	-.014	.011

Link function: Logit.

Task #122

Warnings

There are 4740 (75.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_122	0	539	27.3%
	1	50	2.5%
	2	141	7.1%
	3	436	22.1%
	4	807	40.9%
Valid		1973	100.0%
Missing		324	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5045.029	5023	.411
Deviance	3574.047	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_122 = 0]	-.890	.058	232.293	1	.000	-1.004	-.775
	[p7_122 = 1]	-.765	.057	178.125	1	.000	-.877	-.653
	[p7_122 = 2]	-.441	.055	63.571	1	.000	-.549	-.333
	[p7_122 = 3]	.462	.055	69.569	1	.000	.353	.570
Location	p12_14apn	-.004	.006	.467	1	.494	-.015	.007
	p12_14dc	.015	.008	3.689	1	.055	.000	.029
	p12_14do	.000	.008	.003	1	.953	-.015	.015
	p12_14md	.007	.003	4.653	1	.031	.001	.014
	p12_14pa	.005	.006	.560	1	.454	-.008	.017

Link function: Logit.

Task #123

Warnings

There are 4732 (76.0%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_123	0	548	28.2%
	1	30	1.5%
	2	112	5.8%
	3	358	18.4%
	4	897	46.1%
Valid		1945	100.0%
Missing		352	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4978.948	4971	.466
Deviance	3360.037	4971	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.010
McFadden	.004

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_123 = 0]	-.844	.059	205.405	1	.000	-.959	-.729
	[p7_123 = 1]	-.768	.058	173.962	1	.000	-.882	-.654
	[p7_123 = 2]	-.503	.057	79.312	1	.000	-.614	-.393
	[p7_123 = 3]	.255	.056	21.108	1	.000	.146	.364
Location	p12_14apn	-.012	.006	4.200	1	.040	-.023	-.001
	p12_14dc	.009	.007	1.433	1	.231	-.006	.023
	p12_14do	.000	.008	.002	1	.965	-.016	.015
	p12_14md	.011	.004	8.859	1	.003	.004	.018
	p12_14pa	.005	.007	.581	1	.446	-.008	.018

Link function: Logit.

Task #124

Warnings

There are 4682 (75.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_124	0	313	16.0%
	1	81	4.1%
	2	243	12.4%
	3	483	24.7%
	4	835	42.7%
Valid		1955	100.0%
Missing		342	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4873.586	4979	.855
Deviance	3719.105	4979	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_124 = 0]	-1.567	.069	523.033	1	.000	-1.701	-1.432
	[p7_124 = 1]	-1.285	.064	404.774	1	.000	-1.410	-1.160
	[p7_124 = 2]	-.632	.057	122.258	1	.000	-.744	-.520
	[p7_124 = 3]	.393	.056	49.447	1	.000	.284	.503
Location	p12_14apn	.012	.006	3.640	1	.056	.000	.025
	p12_14dc	.004	.007	.366	1	.545	-.010	.018
	p12_14do	.007	.008	.782	1	.376	-.009	.024
	p12_14md	.004	.003	1.294	1	.255	-.003	.011
	p12_14pa	.004	.006	.379	1	.538	-.009	.016

Link function: Logit.

Task #125

Warnings

There are 4723 (75.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_125	0	191	9.7%
	1	114	5.8%
	2	359	18.2%
	3	667	33.9%
	4	639	32.4%
Valid		1970	100.0%
Missing		327	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5001.509	5023	.582
Deviance	3839.422	5023	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.009
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_125 = 0]	-2.154	.081	701.147	1	.000	-2.314	-1.995
	[p7_125 = 1]	-1.618	.069	556.150	1	.000	-1.753	-1.484
	[p7_125 = 2]	-.593	.056	111.770	1	.000	-.703	-.483
	[p7_125 = 3]	.826	.058	205.759	1	.000	.713	.939
Location	p12_14apn	.021	.007	10.553	1	.001	.009	.034
	p12_14dc	.007	.007	1.046	1	.306	-.007	.021
	p12_14do	.003	.008	.151	1	.698	-.012	.018
	p12_14md	.000	.003	.001	1	.975	-.007	.006
	p12_14pa	.007	.006	1.304	1	.254	-.005	.019

Link function: Logit.

Task #126

Warnings

There are 4705 (75.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_126	0	180	9.2%
	1	102	5.2%
	2	330	16.8%
	3	649	33.0%
	4	703	35.8%
Valid		1964	100.0%
Missing		333	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4976.009	4995	.573
Deviance	3773.076	4995	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.005
Nagelkerke	.005
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_126 = 0]	-2.233	.083	718.634	1	.000	-2.396	-2.070
	[p7_126 = 1]	-1.724	.071	598.062	1	.000	-1.862	-1.586
	[p7_126 = 2]	-.728	.057	163.592	1	.000	-.839	-.616
	[p7_126 = 3]	.654	.056	134.980	1	.000	.544	.765
Location	p12_14apn	.015	.006	5.755	1	.016	.003	.027
	p12_14dc	.008	.007	1.315	1	.251	-.006	.022
	p12_14do	.003	.008	.155	1	.694	-.012	.018
	p12_14md	.000	.003	.010	1	.921	-.007	.006
	p12_14pa	.006	.006	.824	1	.364	-.006	.018

Link function: Logit.

Task #127

Warnings

There are 4669 (74.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_127	0	213	11.0%
	1	194	10.0%
	2	484	24.9%
	3	591	30.4%
	4	461	23.7%
Valid		1943	100.0%
Missing		354	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5037.032	4979	.279
Deviance	4037.137	4979	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.009
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_127 = 0]	-2.042	.078	682.042	1	.000	-2.195	-1.889
	[p7_127 = 1]	-1.273	.063	410.428	1	.000	-1.397	-1.150
	[p7_127 = 2]	-.105	.054	3.726	1	.054	-.211	.002
	[p7_127 = 3]	1.239	.062	400.967	1	.000	1.118	1.361
Location	p12_14apn	.021	.006	11.728	1	.001	.009	.032
	p12_14dc	.011	.007	2.467	1	.116	-.003	.024
	p12_14do	.004	.007	.363	1	.547	-.010	.019
	p12_14md	-.005	.003	2.187	1	.139	-.011	.002
	p12_14pa	.011	.006	3.372	1	.066	-.001	.023

Link function: Logit.

Task #128

Warnings

There are 4691 (74.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_128	0	275	14.1%
	1	217	11.2%
	2	554	28.5%
	3	515	26.5%
	4	383	19.7%
Valid		1944	100.0%
Missing		353	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5030.612	5003	.389
Deviance	4157.735	5003	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.006
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound		Lower Bound	Upper Bound
Threshold	[p7_128 = 0]	-1.755	.071	610.413	1	.000	-1.894	-1.616
	[p7_128 = 1]	-1.032	.060	300.673	1	.000	-1.149	-.915
	[p7_128 = 2]	.208	.054	14.671	1	.000	.101	.314
	[p7_128 = 3]	1.465	.065	509.636	1	.000	1.338	1.593
Location	p12_14apn	.017	.006	8.599	1	.003	.006	.028
	p12_14dc	.010	.007	2.305	1	.129	-.003	.024
	p12_14do	.001	.007	.013	1	.911	-.013	.015
	p12_14md	-.001	.003	.192	1	.661	-.008	.005
	p12_14pa	.004	.006	.439	1	.508	-.008	.015

Link function: Logit.

Task #129

Warnings

There are 4700 (74.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_129	0	251	12.8%
	1	184	9.4%
	2	469	23.9%
	3	581	29.6%
	4	477	24.3%
Valid		1962	100.0%
Missing		335	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5032.688	5019	.443
Deviance	4116.767	5019	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.008
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_129 = 0]	-1.862	.073	644.535	1	.000	-2.006	-1.718
	[p7_129 = 1]	-1.197	.061	379.398	1	.000	-1.317	-1.076
	[p7_129 = 2]	-.094	.054	3.006	1	.083	-.199	.012
	[p7_129 = 3]	1.207	.061	390.196	1	.000	1.087	1.327
Location	p12_14apn	.020	.006	11.368	1	.001	.009	.032
	p12_14dc	.007	.007	1.070	1	.301	-.006	.020
	p12_14do	.003	.007	.137	1	.711	-.012	.017
	p12_14md	-.002	.003	.530	1	.467	-.009	.004
	p12_14pa	.008	.006	1.596	1	.207	-.004	.019

Link function: Logit.

Task #130

Warnings

There are 4759 (75.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_130	0	205	10.4%
	1	62	3.1%
	2	206	10.5%
	3	605	30.7%
	4	893	45.3%
Valid		1971	100.0%
Missing		326	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5121.819	5015	.143
Deviance	3490.837	5015	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.013
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_130 = 0]	-2.064	.080	672.087	1	.000	-2.220	-1.908
	[p7_130 = 1]	-1.763	.072	594.158	1	.000	-1.905	-1.621
	[p7_130 = 2]	-1.058	.061	302.614	1	.000	-1.177	-.939
	[p7_130 = 3]	.295	.055	28.270	1	.000	.186	.404
Location	p12_14apn	.002	.006	.065	1	.799	-.010	.013
	p12_14dc	-.011	.007	2.576	1	.108	-.024	.002
	p12_14do	-.009	.008	1.242	1	.265	-.024	.007
	p12_14md	.015	.004	15.616	1	.000	.008	.023
	p12_14pa	.000	.006	.006	1	.941	-.012	.013

Link function: Logit.

Task #131

Warnings

There are 4808 (76.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_131	0	132	6.7%
	1	45	2.3%
	2	128	6.5%
	3	511	25.9%
	4	1156	58.6%
Valid		1972	100.0%
Missing		325	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4883.330	5027	.925
Deviance	2961.013	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.016
Nagelkerke	.018
McFadden	.007

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_131 = 0]	-2.578	.096	717.196	1	.000	-2.766	-2.389
	[p7_131 = 1]	-2.258	.086	694.432	1	.000	-2.426	-2.090
	[p7_131 = 2]	-1.634	.071	534.953	1	.000	-1.773	-1.496
	[p7_131 = 3]	-.268	.057	22.216	1	.000	-.379	-.157
Location	p12_14apn	-.012	.006	4.272	1	.039	-.024	-.001
	p12_14dc	-.018	.007	6.992	1	.008	-.032	-.005
	p12_14do	-.014	.008	2.854	1	.091	-.030	.002
	p12_14md	.019	.004	18.104	1	.000	.010	.028
	p12_14pa	-4.69E-005	.007	.000	1	.995	-.014	.013

Link function: Logit.

Task #132

Warnings

There are 4713 (75.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p7_132	0	337	17.2%
	1	77	3.9%
	2	231	11.8%
	3	609	31.0%
	4	708	36.1%
Valid		1962	100.0%
Missing		335	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5128.370	5003	.106
Deviance	3767.845	5003	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.019
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p7_132 = 0]	-1.488	.067	495.827	1	.000	-1.619	-1.357
	[p7_132 = 1]	-1.232	.063	384.456	1	.000	-1.355	-1.109
	[p7_132 = 2]	-.620	.057	119.788	1	.000	-.731	-.509
	[p7_132 = 3]	.683	.057	143.712	1	.000	.571	.794
Location	p12_14apn	-.013	.006	5.030	1	.025	-.024	-.002
	p12_14dc	-.014	.007	3.435	1	.064	-.028	.001
	p12_14do	-.001	.008	.009	1	.924	-.016	.015
	p12_14md	.016	.004	19.315	1	.000	.009	.023
	p12_14pa	.003	.006	.170	1	.680	-.010	.015

Link function: Logit.

Task #133

Warnings

There are 4895 (77.6%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_133	0	118	6.0%
	1	14	.7%
	2	67	3.4%
	3	232	11.7%
	4	1549	78.2%
Valid		1980	100.0%
Missing		317	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5143.580	5039	.149
Deviance	2065.300	5039	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.016
Nagelkerke	.021
McFadden	.011

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_133 = 0]	-2.612	.104	625.694	1	.000	-2.817	-2.407
	[p8_133 = 1]	-2.491	.100	620.099	1	.000	-2.688	-2.295
	[p8_133 = 2]	-2.040	.087	555.698	1	.000	-2.210	-1.871
	[p8_133 = 3]	-1.118	.070	253.395	1	.000	-1.256	-.981
Location	p12_14apn	-.011	.007	2.250	1	.134	-.025	.003
	p12_14dc	-.010	.008	1.745	1	.187	-.026	.005
	p12_14do	-.020	.011	3.235	1	.072	-.041	.002
	p12_14md	.033	.007	20.433	1	.000	.019	.047
	p12_14pa	-.003	.009	.109	1	.741	-.020	.014

Link function: Logit.

Task #134

Warnings

There are 4853 (77.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_134	0	95	4.8%
	1	26	1.3%
	2	72	3.7%
	3	276	14.0%
	4	1500	76.2%
Valid		1969	100.0%
Missing		328	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5365.454	5007	.000
Deviance	2138.087	5007	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.019
Nagelkerke	.024
McFadden	.012

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_134 = 0]	-2.816	.114	614.672	1	.000	-3.038	-2.593
	[p8_134 = 1]	-2.558	.103	614.574	1	.000	-2.760	-2.356
	[p8_134 = 2]	-2.047	.087	551.423	1	.000	-2.218	-1.877
	[p8_134 = 3]	-.979	.069	201.916	1	.000	-1.114	-.844
Location	p12_14apn	-.008	.007	1.066	1	.302	-.022	.007
	p12_14dc	-.014	.007	3.459	1	.063	-.029	.001
	p12_14do	-.022	.011	4.021	1	.045	-.043	.000
	p12_14md	.033	.007	21.258	1	.000	.019	.047
	p12_14pa	.005	.010	.329	1	.566	-.013	.024

Link function: Logit.

Task #135

Warnings

There are 4920 (77.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_135	0	66	3.3%
	1	8	.4%
	2	65	3.3%
	3	311	15.7%
	4	1534	77.3%
Valid		1984	100.0%
Missing		313	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5131.497	5051	.211
Deviance	2022.114	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.012
McFadden	.006

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_135 = 0]	-3.292	.132	622.261	1	.000	-3.551	-3.034
	[p8_135 = 1]	-3.173	.126	638.113	1	.000	-3.420	-2.927
	[p8_135 = 2]	-2.508	.097	663.393	1	.000	-2.698	-2.317
	[p8_135 = 3]	-1.141	.068	281.786	1	.000	-1.274	-1.008
Location	p12_14apn	.001	.008	.007	1	.935	-.015	.017
	p12_14dc	-.018	.007	6.054	1	.014	-.033	-.004
	p12_14do	-.002	.011	.046	1	.829	-.025	.020
	p12_14md	.016	.006	7.803	1	.005	.005	.027
	p12_14pa	-.004	.008	.183	1	.668	-.020	.013

Link function: Logit.

Task #136

Warnings

There are 4835 (76.8%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_136	0	79	4.0%
	1	26	1.3%
	2	160	8.1%
	3	417	21.2%
	4	1283	65.3%
Valid		1965	100.0%
Missing		332	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5039.771	5027	.447
Deviance	2708.833	5027	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.007
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_136 = 0]	-3.154	.120	690.469	1	.000	-3.389	-2.918
	[p8_136 = 1]	-2.854	.106	722.785	1	.000	-3.063	-2.646
	[p8_136 = 2]	-1.836	.074	607.122	1	.000	-1.982	-1.690
	[p8_136 = 3]	-.603	.059	106.182	1	.000	-.718	-.489
Location	p12_14apn	.005	.007	.455	1	.500	-.009	.019
	p12_14dc	-.019	.007	7.365	1	.007	-.033	-.005
	p12_14do	-.011	.008	1.717	1	.190	-.027	.005
	p12_14md	.009	.004	4.533	1	.033	.001	.017
	p12_14pa	-.003	.007	.196	1	.658	-.016	.010

Link function: Logit.

Task #137

Warnings

There are 4857 (76.9%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_137	0	225	11.3%
	1	29	1.5%
	2	80	4.0%
	3	236	11.9%
	4	1413	71.3%
Valid		1983	100.0%
Missing		314	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5133.526	5047	.194
Deviance	2550.920	5047	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.004
McFadden	.002

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_137 = 0]	-1.973	.080	611.884	1	.000	-2.130	-1.817
	[p8_137 = 1]	-1.835	.077	573.615	1	.000	-1.985	-1.685
	[p8_137 = 2]	-1.513	.071	460.720	1	.000	-1.652	-1.375
	[p8_137 = 3]	-.823	.062	174.690	1	.000	-.945	-.701
Location	p12_14apn	.000	.007	.000	1	.985	-.013	.014
	p12_14dc	.002	.008	.043	1	.836	-.015	.018
	p12_14do	.010	.011	.759	1	.384	-.012	.032
	p12_14md	.004	.004	.757	1	.384	-.005	.012
	p12_14pa	.010	.009	1.224	1	.268	-.007	.026

Link function: Logit.

Task #138

Warnings

There are 4884 (77.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_138	0	186	9.4%
	1	13	.7%
	2	44	2.2%
	3	194	9.8%
	4	1543	77.9%
Valid		1980	100.0%
Missing		317	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5500.759	5031	.000
Deviance	2094.361	5031	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.011
Nagelkerke	.015
McFadden	.008

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_138 = 0]	-2.124	.089	574.737	1	.000	-2.298	-1.951
	[p8_138 = 1]	-2.049	.087	559.269	1	.000	-2.219	-1.879
	[p8_138 = 2]	-1.823	.081	501.871	1	.000	-1.982	-1.663
	[p8_138 = 3]	-1.112	.070	251.452	1	.000	-1.250	-.975
Location	p12_14apn	-.004	.008	.231	1	.630	-.019	.011
	p12_14dc	-.011	.008	1.962	1	.161	-.026	.004
	p12_14do	.017	.017	1.016	1	.313	-.016	.049
	p12_14md	.020	.006	9.326	1	.002	.007	.032
	p12_14pa	-.003	.009	.084	1	.772	-.020	.015

Link function: Logit.

Task #139

Warnings

There are 4935 (78.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_139	0	159	8.0%
	1	5	.3%
	2	14	.7%
	3	105	5.3%
	4	1702	85.7%
Valid		1985	100.0%
Missing		312	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	6260.202	5043	.000
Deviance	1425.020	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.027
McFadden	.017

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_139 = 0]	-2.153	.101	451.595	1	.000	-2.351	-1.954
	[p8_139 = 1]	-2.119	.100	445.528	1	.000	-2.316	-1.922
	[p8_139 = 2]	-2.028	.098	428.030	1	.000	-2.221	-1.836
	[p8_139 = 3]	-1.499	.087	293.817	1	.000	-1.671	-1.328
Location	p12_14apn	-.008	.009	.699	1	.403	-.026	.010
	p12_14dc	-.003	.010	.090	1	.764	-.023	.017
	p12_14do	.021	.025	.720	1	.396	-.027	.069
	p12_14md	.043	.011	15.326	1	.000	.022	.065
	p12_14pa	-.002	.011	.022	1	.881	-.024	.021

Link function: Logit.

Task #140

Warnings

There are 4960 (78.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_140	0	62	3.1%
	1	3	.2%
	2	19	1.0%
	3	167	8.4%
	4	1735	87.4%
Valid		1986	100.0%
Missing		311	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4506.429	5051	1.000
Deviance	1309.024	5051	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.014
Nagelkerke	.022
McFadden	.014

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_140 = 0]	-3.322	.140	562.772	1	.000	-3.597	-3.048
	[p8_140 = 1]	-3.273	.137	567.927	1	.000	-3.543	-3.004
	[p8_140 = 2]	-3.005	.124	587.760	1	.000	-3.247	-2.762
	[p8_140 = 3]	-1.802	.086	436.761	1	.000	-1.971	-1.633
Location	p12_14apn	-.003	.010	.086	1	.770	-.023	.017
	p12_14dc	-.014	.009	2.703	1	.100	-.031	.003
	p12_14do	-.030	.012	6.300	1	.012	-.054	-.007
	p12_14md	.039	.010	16.080	1	.000	.020	.057
	p12_14pa	-.017	.009	3.654	1	.056	-.034	.000

Link function: Logit.

Task #141

Warnings

There are 3679 (73.2%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_141	0	29	1.5%
	2	16	.8%
	3	199	10.1%
	4	1720	87.6%
Valid		1964	100.0%
Missing		333	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	3348.235	3763	1.000
Deviance	1166.045	3763	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.008
Nagelkerke	.013
McFadden	.009

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_141 = 0]	-4.151	.195	452.465	1	.000	-4.534	-3.769
	[p8_141 = 2]	-3.703	.161	530.671	1	.000	-4.018	-3.388
	[p8_141 = 3]	-1.894	.087	470.459	1	.000	-2.065	-1.723
Location	p12_14apn	.004	.011	.114	1	.735	-.018	.026
	p12_14dc	-.025	.008	9.660	1	.002	-.041	-.009
	p12_14do	.013	.019	.494	1	.482	-.024	.050
	p12_14md	.012	.007	2.519	1	.112	-.003	.026
	p12_14pa	-.008	.010	.605	1	.437	-.027	.012

Link function: Logit.

Task #142

Warnings

There are 4965 (78.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_142	0	25	1.3%
	1	4	.2%
	2	25	1.3%
	3	237	11.9%
	4	1700	85.4%
Valid		1991	100.0%
Missing		306	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	5004.189	5059	.705
Deviance	1329.113	5059	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.010
Nagelkerke	.015
McFadden	.010

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_142 = 0]	-4.218	.208	410.303	1	.000	-4.626	-3.810
	[p8_142 = 1]	-4.067	.195	437.110	1	.000	-4.448	-3.686
	[p8_142 = 2]	-3.432	.148	537.884	1	.000	-3.722	-3.142
	[p8_142 = 3]	-1.608	.083	374.024	1	.000	-1.771	-1.445
Location	p12_14apn	.011	.013	.754	1	.385	-.014	.037
	p12_14dc	-.018	.008	4.893	1	.027	-.034	-.002
	p12_14do	.002	.016	.022	1	.882	-.029	.034
	p12_14md	.016	.008	4.330	1	.037	.001	.030
	p12_14pa	.014	.014	1.037	1	.309	-.013	.041

Link function: Logit.

Task #143

Warnings

There are 4926 (78.1%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_143	0	17	.9%
	1	4	.2%
	2	35	1.8%
	3	326	16.5%
	4	1597	80.7%
Valid		1979	100.0%
Missing		318	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	3028.880	5035	1.000
Deviance	1510.309	5035	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.015
Nagelkerke	.022
McFadden	.013

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_143 = 0]	-4.611	.248	345.819	1	.000	-5.097	-4.125
	[p8_143 = 1]	-4.396	.224	384.203	1	.000	-4.835	-3.956
	[p8_143 = 2]	-3.391	.144	556.293	1	.000	-3.673	-3.110
	[p8_143 = 3]	-1.271	.075	290.013	1	.000	-1.417	-1.125
Location	p12_14apn	.011	.011	.999	1	.318	-.011	.034
	p12_14dc	-.025	.008	10.864	1	.001	-.040	-.010
	p12_14do	-.007	.013	.272	1	.602	-.031	.018
	p12_14md	.019	.007	7.969	1	.005	.006	.033
	p12_14pa	.013	.012	1.119	1	.290	-.011	.036

Link function: Logit.

Task #144

Warnings

There are 4953 (78.4%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_144	0	16	.8%
	1	6	.3%
	2	28	1.4%
	3	240	12.2%
	4	1684	85.3%
Valid		1974	100.0%
Missing		323	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4481.148	5043	1.000
Deviance	1351.189	5043	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.006
Nagelkerke	.009
McFadden	.005

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_144 = 0]	-4.677	.256	333.804	1	.000	-5.179	-4.176
	[p8_144 = 1]	-4.356	.220	391.123	1	.000	-4.787	-3.924
	[p8_144 = 2]	-3.520	.152	536.592	1	.000	-3.817	-3.222
	[p8_144 = 3]	-1.624	.082	393.367	1	.000	-1.785	-1.464
Location	p12_14apn	.001	.010	.008	1	.927	-.019	.020
	p12_14dc	-.008	.009	.750	1	.387	-.026	.010
	p12_14do	.001	.015	.005	1	.941	-.029	.031
	p12_14md	.016	.007	4.995	1	.025	.002	.031
	p12_14pa	.005	.012	.189	1	.663	-.018	.028

Link function: Logit.

Task #145

Warnings

There are 4968 (78.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_145	0	13	.7%
	1	3	.2%
	2	27	1.4%
	3	264	13.3%
	4	1680	84.5%
Valid		1987	100.0%
Missing		310	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4543.882	5055	1.000
Deviance	1353.892	5055	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.019
McFadden	.012

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_145 = 0]	-4.894	.283	299.281	1	.000	-5.448	-4.339
	[p8_145 = 1]	-4.685	.256	334.239	1	.000	-5.187	-4.182
	[p8_145 = 2]	-3.681	.163	510.403	1	.000	-4.000	-3.361
	[p8_145 = 3]	-1.557	.081	366.965	1	.000	-1.716	-1.397
Location	p12_14apn	-.009	.008	1.280	1	.258	-.025	.007
	p12_14dc	-.022	.008	7.650	1	.006	-.037	-.006
	p12_14do	.001	.016	.005	1	.942	-.029	.032
	p12_14md	.021	.008	7.021	1	.008	.005	.036
	p12_14pa	.015	.014	1.163	1	.281	-.012	.041

Link function: Logit.

Task #146

Warnings

There are 4963 (78.5%) cells (i.e., dependent variable levels by combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
p8_146	0	6	.3%
	1	2	.1%
	2	37	1.9%
	3	216	10.9%
	4	1717	86.8%
Valid		1978	100.0%
Missing		319	
Total		2297	

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	4336.039	5047	1.000
Deviance	1245.092	5047	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.003
Nagelkerke	.005
McFadden	.003

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
Threshold	[p8_146 = 0]	-5.730	.412	193.523	1	.000	-6.538	-4.923
	[p8_146 = 1]	-5.441	.358	231.286	1	.000	-6.143	-4.740
	[p8_146 = 2]	-3.695	.159	539.178	1	.000	-4.007	-3.383
	[p8_146 = 3]	-1.817	.084	469.253	1	.000	-1.981	-1.653
Location	p12_14apn	-.006	.009	.508	1	.476	-.023	.011
	p12_14dc	-.009	.009	.853	1	.356	-.027	.010
	p12_14do	.013	.018	.556	1	.456	-.021	.048
	p12_14md	.010	.007	2.049	1	.152	-.004	.023
	p12_14pa	-.003	.010	.072	1	.788	-.023	.017

Link function: Logit.

APPENDIX U

Criticality Analysis
Exclusion Rules, Task Extent, Population Importance, and Subgroup Importance Outcomes in Task List Order

Task Exclusion Rules

Exclude a task if

1 - % performing is less than 66.7%

2 - Mean importance is less than 2.60 for the whole sample

Mean importance is less than 2.50 for more than one of each subgroup by

3 - region
4 - profession
5 - years in the profession
6 - primary work responsibility
7 - occupational health training
8 - training course attendance
9 - number of physical examinations performed per month
10 - years performing physical examinations
11 - community
12 - year of birth
13 - gender

Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IA1 Verify the identity of the driver	2237	3.73	0.01	0.56	97.73	
IA2 Ensure the driver signs the driver's statement about health history	2244	3.42	0.02	0.83	98.81	
IA3a Identify, query, and note issues in a driver's medical record and / or health history as available, which may include specifics regarding any affirmative responses in the history	2287	3.72	0.01	0.49	100.00	
IA3b Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any illness, surgery, or injury in the last five years	2281	3.55	0.01	0.62	99.96	
IA3c Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any other hospitalizations or surgeries	2280	3.30	0.02	0.75	99.91	
IA3d Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any recent changes in health status	2277	3.68	0.01	0.52	99.82	
IA3e Identify, query, and note issues in a driver's medical record and / or health history as available, which may include whether he / she has any medical conditions or current complaints	2279	3.73	0.01	0.50	99.91	
IA3f Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any incidents of disability / physical limitations	2273	3.76	0.01	0.50	99.82	
IA3g Identify, query, and note issues in a driver's medical record and / or health history as available, which may include limitations placed during prior FMCSA exams	2228	3.67	0.01	0.62	98.02	
IA3h Identify, query, and note issues in a driver's medical record and / or health history as available, which may include current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying	2281	3.75	0.01	0.52	99.78	
IA3i Identify, query, and note issues in a driver's medical record and / or health history as available, which may include his or her use of recreational / addictive substances (e.g., nicotine, alcohol, inhalants)	2267	3.67	0.01	0.60	99.52	
IA3j Identify, query, and note issues in a driver's medical record and / or health history as available, which may include weight disorders (e.g., unexplained loss or gain, obesity)	2250	2.96	0.02	0.82	98.86	

Task Exclusion Rules

Exclude a task if

1 - % performing is less than 66.7%

2 - Mean importance is less than 2.60 for the whole sample

Mean importance is less than 2.50 for more than one of each subgroup by

3 - region
4 - profession
5 - years in the profession
6 - primary work responsibility
7 - occupational health training
8 - training course attendance
9 - number of physical examinations performed per month
10 - years performing physical examinations
11 - community
12 - year of birth
13 - gender

Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IA3k Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, macular degeneration, monocular vision)	2281	3.76	0.01	0.49	99.82	
IA3l Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the ears (e.g., hearing loss, hearing aids, vertigo, Meniere's, tinnitus, implants)	2277	3.56	0.01	0.62	99.87	
IA3m Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiac symptoms (e.g., syncope, dyspnea, chest pain, palpitations)	2275	3.87	0.01	0.36	99.87	
IA3n Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiovascular diseases (e.g., hypertension, congestive heart failure, myocardial infarction, coronary insufficiency, or thrombosis)	2282	3.82	0.01	0.43	99.91	
IA3o Identify, query, and note issues in a driver's medical record and / or health history as available, which may include hematologic disorders (e.g., bleeding disorders, anemia, cancer, organ transplant history)	2261	3.24	0.02	0.75	99.38	
IA3p Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	2257	3.39	0.01	0.70	99.69	
IA3q Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary diseases (e.g., asthma, chronic lung disorders, tuberculosis, previous pulmonary embolus, pneumothorax)	2278	3.37	0.02	0.72	99.82	
IA3r Identify, query, and note issues in a driver's medical record and / or health history as available, which may include sleep disorders (e.g., sleep apnea, narcolepsy, insomnia, daytime sleepiness, loud snoring, testing and / or treatments)	2275	3.72	0.01	0.55	99.74	

Task Exclusion Rules

Exclude a task if

1 - % performing is less than 66.7%

2 - Mean importance is less than 2.60 for the whole sample

Mean importance is less than 2.50 for more than one of each subgroup by

3 - region
4 - profession
5 - years in the profession
6 - primary work responsibility
7 - occupational health training
8 - training course attendance
9 - number of physical examinations performed per month
10 - years performing physical examinations
11 - community
12 - year of birth
13 - gender

Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IA3s Identify, query, and note issues in a driver's medical record and / or health history as available, which may include gastrointestinal disorders (e.g., pancreatitis, ulcers, ulcerative colitis, cirrhosis, hepatitis, irritable bowel syndrome, hernias)	2267	2.85	0.02	0.85	99.21	
IA3t Identify, query, and note issues in a driver's medical record and / or health history as available, which may include genitourinary disorders (e.g., polycystic, nephrotic syndrome, kidney stones, renal failure, hernias)	2253	2.87	0.02	0.90	99.12	
IA3u Identify, query, and note issues in a driver's medical record and / or health history as available, which may include diabetes mellitus	2266	3.80	0.01	0.45	99.91	
IA3v Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other endocrine disorders (e.g., thyroid disorders, interventions / treatment)	2255	2.85	0.02	0.85	98.69	
IA3w Identify, query, and note issues in a driver's medical record and / or health history as available, which may include musculoskeletal disorders (e.g., amputations, arthritis, spinal surgery)	2276	3.38	0.02	0.73	99.96	
IA3x Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neoplastic disorders (e.g., leukemia; brain, bone, breast, and lung cancer)	2249	3.19	0.02	0.83	98.90	
IA3y Identify, query, and note issues in a driver's medical record and / or health history as available, which may include substance use and abuse (e.g., alcohol, narcotics, illicit or legal drugs)	2264	3.83	0.01	0.46	99.74	
IA3z Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neurologic disorders (e.g., loss of consciousness, seizures, stroke / TIA, headaches / migraines, numbness / weakness)	2282	3.91	0.01	0.32	100.00	
IA3aa Identify, query, and note issues in a driver's medical record and / or health history as available, which may include psychiatric disorders (e.g., schizophrenia, depression, anxiety, bipolar, ADHD, interventions / treatment)	2274	3.56	0.01	0.66	99.69	

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Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IA3bb Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other conditions that could impair a driver's ability to safely function	2260	3.65	0.01	0.59	99.38	
IB1 Ensure the driver is properly clothed for the physical examination	2221	2.68	0.02	1.01	97.80	
IB2 Record height and weight, and note whether a driver is overweight or underweight	2261	2.89	0.02	0.87	99.65	
IB3a Examine the driver's eyes and note distant acuity in each and both eyes (Snellen comparable values)	2251	3.84	0.01	0.40	99.47	
IB3b Examine the driver's eyes and note whether corrective lenses are required to meet the standard	2249	3.78	0.01	0.49	99.47	
IB3c Examine the driver's eyes and note horizontal field of vision in each eye	2233	3.58	0.01	0.63	99.11	
IB3d Examine the driver's eyes and note color recognition	2223	3.50	0.01	0.70	98.89	
IB3e Examine the driver's eyes and note presence or absence of monocular vision	2222	3.66	0.01	0.63	98.71	
IB3f Examine the driver's eyes and note reactivity to light and pupillary equality	2247	3.29	0.02	0.81	99.78	
IB3g Examine the driver's eyes and note evidence of nystagmus and exophthalmos	2230	3.14	0.02	0.85	99.38	
IB3h Examine the driver's eyes and note evaluation of extraoccular movements	2228	3.28	0.02	0.81	99.24	
IB3i Examine the driver's eyes and note fundoscopic examination results	2042	2.84	0.02	0.96	90.96	
IB4a Examine the driver's ears and note abnormalities of the ear canal and tympanic membrane	2254	2.94	0.02	0.91	99.43	
IB4b Examine the driver's ears and note whisper test and / or audiometric results (in ANSI standard units) as indicated	2238	3.55	0.01	0.69	99.51	
IB4c Examine the driver's ears and note presence or absence of a hearing aid and whether required to meet the standard	2231	3.59	0.01	0.66	99.69	
IB5 Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing	2253	3.06	0.02	0.89	99.65	
IB6a Examine the driver's neck and note range of motion	2240	3.29	0.02	0.79	99.07	

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IB6b Examine the driver's neck and note soft tissue palpation / examination (e.g., lymph nodes, thyroid gland)	2207	2.78	0.02	0.93	98.70	
IB7a Examine the driver's heart: chest inspection (e.g., surgical scars, pacemaker / IAD)	2234	3.44	0.02	0.77	98.81	
IB7b Examine the driver's heart: thrills, murmurs, extra sounds, and enlargement	2248	3.60	0.01	0.63	99.73	
IB7c Examine the driver's heart: blood pressure and pulse (rate and rhythm)	2243	3.81	0.01	0.43	99.87	
IB7d Examine the driver's heart: additional signs of disease (e.g., edema, bruits, diaphoresis, distended neck veins)	2225	3.54	0.01	0.66	99.64	
IB8a Examine the driver's lungs, chest, and thorax, excluding breasts, and note respiratory rate and pattern	2245	3.29	0.02	0.79	99.29	
IB8b Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal breath sounds	2250	3.43	0.02	0.72	99.78	
IB8c Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal chest wall configuration / palpation	2205	3.00	0.02	0.91	98.57	
IB8d Examine the driver's lungs, chest, and thorax, excluding breasts, and note scars	2195	2.79	0.02	0.98	97.86	
IB9a Examine the driver's abdomen, and note surgical scars	2225	2.69	0.02	0.98	98.36	
IB9b Examine the driver's abdomen, and note an enlarged liver or spleen	2230	3.18	0.02	0.84	98.98	
IB9c Examine the driver's abdomen, and note abnormal masses or bruits / pulsation	2230	3.43	0.02	0.75	99.38	
IB9d Examine the driver's abdomen, and note abdominal tenderness	2222	3.13	0.02	0.86	99.51	
IB9e Examine the driver's abdomen, and note hernias (e.g., inguinal, umbilical, ventral, femoral)	2208	2.94	0.02	0.94	98.92	
IB10a Examine the driver's spine and note surgical scars and deformities	2236	3.07	0.02	0.90	99.03	
IB10b Examine the driver's spine and note tenderness and muscle spasm	2233	3.00	0.02	0.88	99.02	
IB10c Examine the driver's spine and note loss in range of motion and painful motion	2233	3.35	0.02	0.78	99.51	
IB10d Examine the driver's spine and note kyphosis, scoliosis, or other spinal deformities	2224	2.90	0.02	0.90	99.02	

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Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IB11a Examine the driver's extremities and note gait, mobility, and posture while bearing his or her weight; limping or signs of pain	2252	3.36	0.02	0.77	99.69	
IB11b Examine the driver's extremities and note loss, impairment, or use of orthosis	2240	3.59	0.01	0.65	99.78	
IB11c Examine the driver's extremities and note deformities, atrophy, weakness, paralysis, surgical scars,	2234	3.58	0.01	0.64	99.78	
IB11d Examine the driver's extremities and note elbow and shoulder strength, function, and mobility	2223	3.40	0.02	0.74	99.37	
IB11e Examine the driver's extremities and note handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	2233	3.56	0.01	0.68	97.81	
IB11f Examine the driver's extremities and note varicosities, skin abnormalities, and cyanosis, clubbing, or edema	2258	2.96	0.02	0.89	98.99	
IB11g Examine the driver's extremities and note leg length discrepancy; lower extremity strength, motion, and function	2220	3.13	0.02	0.88	97.93	
IB12a Examine the driver's neurologic status and note impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)	2262	3.69	0.01	0.58	99.30	
IB12b Examine the driver's neurologic status and note gait disorders	2259	3.31	0.02	0.78	99.43	
IB12c Examine the driver's neurologic status and note sensory or positional abnormalities	2219	3.38	0.02	0.76	97.93	
IB12d Examine the driver's neurologic status and note tremor	2265	3.24	0.02	0.80	99.69	
IB12e Examine the driver's neurologic status and note radicular signs	2237	3.20	0.02	0.84	98.81	
IB12f Examine the driver's neurologic status and note reflexes (e.g., asymmetric deep-tendon, normal / abnormal patellar and Babinski	2252	3.22	0.02	0.86	99.25	
IB13 Test the driver's urine and note specific gravity, protein, blood, and glucose	2237	3.52	0.02	0.75	99.29	
IB14a Examine the driver's mental status and note comprehension and interaction	2269	3.54	0.01	0.68	99.56	
IB14b Examine the driver's mental status and note cognitive impairment (e.g., orientation, intellect, memory, obsessions, circumstantial / tangential speech)	2247	3.56	0.01	0.68	98.60	

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Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IB14c Examine the driver's mental status and note signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	2249	3.49	0.02	0.72	98.81	
IC1a Obtain additional information when indicated by audiometrics	2139	3.36	0.02	0.80	93.94	
IC1b Obtain additional information when indicated by cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2132	3.56	0.02	0.72	93.80	
IC1c Obtain additional information when indicated by blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2017	3.03	0.02	0.93	88.62	
IC1d Obtain additional information when indicated by chest radiograph	1931	2.72	0.02	0.99	85.56	
IC1e Obtain additional information when indicated by respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	1944	2.84	0.02	0.96	85.64	
IC1f Obtain additional information when indicated by sleep studies	1973	3.27	0.02	0.89	87.26	
IC1g Obtain additional information when indicated by drug level monitoring (e.g., digoxin, theophylline)	1799	2.93	0.02	0.97	79.78	
IC1h Obtain additional information when indicated by other tests	1613	2.70	0.02	0.99	76.92	
IC2 Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider: vision, cardiac, pulmonary, endocrine, musculoskeletal, neurologic, sleep, mental/emotional health	2271	3.83	0.01	0.43	99.56	
IC3a Refer a driver with limitations in extremity movement for an on-road performance evaluation and / or skill performance evaluation	2011	3.60	0.01	0.65	88.24	
IC3b Refer a driver for conditions not directly related to certification, but detected during the examination	2167	3.07	0.02	0.89	95.93	
ID1a Record / include results as available with other information about the driver, which may include audiometrics	2157	3.40	0.02	0.77	94.98	
ID1b Record / include results as available with other information about the driver, which may include cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2151	3.51	0.02	0.73	94.47	

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ID1c Record / include results as available with other information about the driver, which may include blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2020	2.90	0.02	0.96	89.14	
ID1d Record / include results as available with other information about the driver, which may include chest radiograph	1947	2.64	0.02	1.02	86.15	
ID1e Record / include results as available with other information about the driver, which may include respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	2016	2.82	0.02	0.98	88.73	
ID1f Record / include results as available with other information about the driver, which may include sleep studies	2021	3.27	0.02	0.90	89.46	
ID1g Record / include results as available with other information about the driver, which may include drug level monitoring (e.g., digoxin, theophylline)	1851	2.89	0.02	0.98	82.38	
ID1h Record / include results as available with other information about the driver, which may include other tests	1766	2.71	0.02	1.02	81.99	
ID1i Record / include results as available with other information about the driver, which may include treating physician's work release	2111	3.37	0.02	0.84	93.99	
ID2 Integrate a specialist's evaluation with other information about the driver	2141	3.43	0.02	0.76	95.97	
ID3 Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption	2064	3.56	0.02	0.75	90.85	
ID4 Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's / optometrist's report as required	2001	3.58	0.02	0.72	88.23	
ID5a Include if available a current skill performance evaluation certificate	1751	3.25	0.02	0.91	77.27	
ID5b Include if available documentation of intracity zone exemption	1514	3.16	0.02	0.95	68.11	
ID6a Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with alcoholism who completed counseling and treatment to the point of full recovery	1801	3.54	0.02	0.75	79.48	
ID6b Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with prohibited drug use who shows evidence he or she is now free from such use	1791	3.56	0.02	0.73	79.42	

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IIA1 Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider	2235	3.57	0.01	0.68	98.03	
IIA2a a. Advise a driver regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g., antihistamines, cold and cough medications) that could negatively affect his or her driving	2237	3.52	0.02	0.72	98.24	
IIA2b Advise a driver that fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving	2202	3.40	0.02	0.78	97.13	
IIA2c Advise a driver with contact lenses he or she should carry a pair of glasses while driving	2007	3.13	0.02	0.91	88.88	
IIA2d Advise a driver with a hearing aid he / she should possess a spare power source for the device while driving	1937	3.07	0.02	0.92	85.67	
IIA2e Advise a driver who has had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	2075	3.31	0.02	0.82	91.57	
IIA2f Advise a driver who has diabetes about glucose monitoring frequencies and the minimum threshold while driving	2130	3.51	0.02	0.73	94.29	
IIA2g1) Advise a driver with a diabetes exemption, he / she should possess a rapidly absorbable form of glucose while driving	1940	3.63	0.01	0.65	85.76	
IIA2g2) Advise a driver with a diabetes exemption, he / she should self-monitor blood glucose one hour before driving and at least once every four hours while driving	1850	3.43	0.02	0.79	81.68	
IIA2g3) Advise a driver with a diabetes exemption, he / she should comply with each condition of his / her exemption	1934	3.64	0.01	0.64	85.88	
IIA2g4) Advise a driver with a diabetes exemption, he / she should plan to submit glucose monitoring logs for each annual recertification	1766	3.36	0.02	0.88	78.80	
IIA3 Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include…	2238	3.73	0.01	0.55	98.55	

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Task List Presented in Survey Order	N	Mean	SE	SD	% Performing	Excluded by rule
IIB1 Consider a driver's ability to…	2045	3.32	0.02	0.83	89.77	
IIB2a Review Skill Performance Evaluation (SPE) cases: identify terms, conditions, and limitations set forth in a driver's SPE Certificate	1648	3.38	0.02	0.81	72.73	
IIB2b Review Skill Performance Evaluation (SPE) cases: ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	1605	3.52	0.02	0.74	71.84	
IIB3 Consider a driver's cognitive ability to…	1885	3.25	0.02	0.89	83.93	
IIB4a Consider general health and wellness factors such as adverse health effects associated with rotating work schedules and irregular sleep patterns	2046	3.02	0.02	0.92	90.45	
IIB4b Consider general health and wellness factors such as long-term effects of fatigue associated with extended work hours without breaks	2045	3.09	0.02	0.91	90.93	
IIB4c Consider general health and wellness factors such as risk factors associated with common dietary choices available to drivers	1992	2.75	0.02	0.97	89.33	
IIB4d Consider general health and wellness factors such as stressors likely associated with extended time away from a driver's social support system	1918	2.62	0.02	0.99	86.05	
IIB4e Consider general health and wellness factors such as short- and long-term health effects of stress from…	1957	2.78	0.02	0.98	87.17	
IIB5 Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment	2029	3.30	0.02	0.83	89.62	
IIB6 Consider for documented conditions the rate of progression, degree of control, and likelihood of sudden incapacitation (e.g., cardiovascular, neurologic, respiratory, musculoskeletal)	2111	3.49	0.02	0.76	93.24	
IIB7 Support the rationale for using FMCSA guidelines that have not been published in regulations yet	1855	3.19	0.02	0.87	82.52	
IIC1a Apply nondiscretionary certification standards to disqualify a driver with a history of epilepsy	2136	3.77	0.01	0.55	94.10	

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IIC1b Apply nondiscretionary certification standards to disqualify a driver with diabetes requiring insulin control (unless accompanied by an exemption)	2142	3.72	0.01	0.61	95.16	
IIC1c Apply nondiscretionary certification standards to disqualify a driver when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption	2197	3.74	0.01	0.54	96.66	
IIC1d Apply nondiscretionary certification standards to disqualify a driver when hearing measurements with or without a hearing aid fall below minimum standards	2163	3.56	0.02	0.71	96.01	
IIC2a Disqualify a driver who is currently taking methadone	2021	3.71	0.01	0.64	88.95	
IIC2b Disqualify a driver who has a current clinical diagnosis of alcoholism	2064	3.81	0.01	0.50	90.81	
IIC2c Disqualify a driver who uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician	2098	3.91	0.01	0.34	92.10	
IIC3 Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists	2207	3.89	0.01	0.36	96.76	
IIC4 Document the reason(s) for the disqualification and / or referral	2214	3.87	0.01	0.36	98.44	
IIC5 Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified	2252	3.84	0.01	0.43	98.73	
IIC6 Certify a driver for an appropriate interval	2252	3.78	0.01	0.47	99.21	
IIC7 Indicate certification status, which may require…	2245	3.83	0.01	0.45	99.20	
IIC8 Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition	2261	3.82	0.01	0.43	99.25	
IIC9 Complete a medical examination report and medical certificate / card…	2260	3.84	0.01	0.42	99.69	

APPENDIX V

Free Responses from the Sample for the Full Survey

(Coverage, p. 9) If inadequately, then specify tasks you perceive should be added:

FMSCA Medical Certification process in order to reach fullest potential to protect public safety MUST have examination forms with several numbers and all examinations begun (completed/or not completed) electronically transmitted to central vs. repository like FAA Medical Certification Branch. Until then many of the most medically unsafe drivers will continue to doctor shop and lie to the next examiner.

Federal and State Regulations do vary. There needs to be a clearer part of reference either through federal or state web sites to find specific variances. They can be very confusing.

Add fasting serum glucose to better screen for diabetes.

C.1. I do not do these tests, but may request them to be done by P.C.P.

Disqualify drivers using sedatives/narcotics or other medications that affect driving even if they have a prescription for the drug.

Ability to know drivers hx drug/Etox testing results/treatments/offenses.

Actually, I feel inadequate. I've read some manuals and done exams but my evaluations are very limited in scope and brief - in our market area $45 to $75 is the fee for a DOT physical, which is very cheap - doesn't encourage an in-depth workup.

Evidence-based limit on driver body mass index, flexibility for min. elevated BP one year and OK the next without meds specific diabetic requirements, such as A1C used to qualify or disqualify diabetic drivers and a path for them to qualify. Nothing about driver age - should consider annual exams for drivers say 70 years or more. Should be penalty for drivers who lie about health hx. Risk Assessment - correspond with drivers job - so ask about driver duties.

I would specify question C2b the driver is a practicing alcoholic as opposed to a recovering or sober alcoholic.

Many of these tasks are actually performed and documented by support staff and documents results reviewed by the examiner during the P. exam. i.e., Health Hx, Vis., vision, audios etc.

Poorly designed - lumped together things that had importance with things that had NO importance. Had to answer yes they were important even though some of the group was completely irrelevant to a DOT exam.
I certainly respect the quality work you've done, in coming up with this survey. You're obviously seeking sufficient detail in order to draw meaningful conclusions, while not taking too much of the examiner's time in completing the survey. I think you've done a very good job. However:
Some of the questions are far too broad to provide a good answer:
Examples:

I-A-1: "Hearing Loss" = common, typically nonsignificant
Vs. "vertigo" = rare but very serious, with regard to the DOT exam

I-A-r: "Insomnia" = common, essentially irrelevant
Vs. "Apnea" = can be very significant

I-A-aa: “Depression” = common, typically mild and nonsignificant
Vs. “Schizophrenia” = not common, but very significant, Re: Dot certification.

Section 2-I-B: Many items have minimal bearing upon driver safety/certification for the next 1-2 years of them driving. Example: “overweight” (I’ve seen them be 400 # and be very agile); “underweight”, ear canal, TM, mouth, Lymph nodes, any scars, abdominal tenderness, varicosities, et al.
Having done thousands of Dot physicals, while trying to closely adhere Dot guidelines, many of these would only extremely rarely be additive/helpful. Sure, rarely they’ll have a scar not noted in the history, but, we trust them, in the history to record E.G. psychiatric issues, stent history, epilepsy, and so on, so we can trust them re: scars, too.

Most of my exams are for Metro bus drivers - load - unload - lifting not required.

Recording items correctly on the physical examination form.

Urine drug screen
Drivers "doctor sharp" so I never have a history other than their word.
I don't understand #C 1.
I need to know when to decide someone is too fat to get CDL.

We are examiners, not Mothers. A large number of the questions on this exam suggest to me that the government is considering expecting me to be a mother. The patient/driver has responsibility and is NOT my job to make sure he/she accepts and performs them.

Smoking/tobacco use needs to be addressed on the forms.

Too many of these tasks are NOT the task of a FMSCA, they are the PEP responsibility. You can’t maintain the health of a complicated patient in one visit.
There are tasks here that should be self evident and on driver/company responsibilities.

It is difficult to assess work situation (ie. scheduling and weather hazards) or related to fitness to operate a CMV at 2 year intervals as these conditions may vary greatly over time.

Confirm adequate treatment of sleep apnea. Differentiate among importance of color vision vs. field vision vs. monocular vision.

Guidelines needed that are not punitive – eg.
1. EKG’s over 40 g/0.
2. CMP’s for drivers every 2 years.
3. HbA1C for diabetics.
4. Check pulse rate resting and after 2 minutes of exercise.
5. Keep the vision parameters.
6. Examiner if certified by Governing Board have final OK.

Many of the tasks, questions etc don’t occur very often, but when they do are very important. This makes it most difficult to answer many of the questions appropriately.

The questions were not real questions. The importance of these “skills” often repeat on the Individual questions.

The hernia exam is silly. No yield and just puts barrier between me and the patient.

Page 8 C #2 you might differentiate between methadone for narcotic addiction and methadone used for pain control. (Just a thought)

Enforcing healthy and appropriate work rules on employers and contractors will do as much, if not more to reduce accidents and illness than screening drivers:
Of crucial importance to medical examiners, is an understanding of the actual history of medical causes of CMV accidents. i.e.: How many accidents are attributed to in part or whole to a medical problem which conditions.

Depends on what you want to know. What does " level of importance" mean? How often do I do it on an exam?

Drop Hernia Exam

I believe I should be evaluating medical risk- I don't believe I can answer the question of whether the person can manage his vehicle. They need a driving test!!

The role of Naturopathic physicians should be included in this service.
- With methadone- it depends on the reason it was used.
- There should be questions about smoking and family- history- especially cardiac
- over thought- it was very good

HgbA1C with in 3 mo of FMSCA Exam on diabetics.

Section 2, IIB7 How does one support rationale for unpublished guidelines - if unpublished, no one's read them!
Most diabetics do not follow with an endocrinologist. If the driver is well controlled or on non-insulin medications, supporting documentation from an endocrinologist may not be needed.
Section 2, ID4.

I feel things were adequately covered - I am in favor of education - wellness training, preventative medicine. Maybe examiners can do a class that incorporates the importance of everything from insulin, sleep, all the way to prostate exams. Keep the drivers healthy, informed they will be more productive and safe. "TEAM MEDICINE APPROACH" maybe every examiner should spend some time as a RIE to see the ride and lifestyle lead by a professional driver.

Test should require drug screen. Need to provide examiners with more info on determining a drivers qualification in light of controlled IDDM, heart disease, etc.

Please Note: It is not possible to screen for mental or substance abuse without previous records. Pts with these problems frequently deny them!

Felt some questions went above and beyond what most current examiners do. Also, some questions seemed more pertinent to a primary care provider role. Often, the CDL physical is performed by individual other than the PCP.

The DOT physical is not the place to do patient education regarding long-term medical conditions ie., diabetes. The DOT physical is a screening process - the person meets the criteria or not. They should have to establish and follow-up with a regular provider for medical

conditions. There is no time to do this and usually no proof of previous control of a condition (i.e. diabetes) when a person presents for a DOT physical.

The survey assumes the examiner will act as an educator of the driver in Section II A and questions C5/C8. The questions should include: Do you feel it is appropriate for the examiners to inform the driver of (whatever the specific issue is). Many of these issues should be addressed by resources other than the examiner. Another question should be whether the examiner feels it is important to have the driver educated about certification and medical issues from other resources (i.e., government resources, website, employer, etc.). Please call me if you have any questions (610) 402-9230.

Provide employer with certification status:

a. 2yr / 1 yr/ 6 months/ 3 months card
b. Disqualification
c. “medical hold” pending receipt of required information

Most of us do not do the special skills/physical testing.

Section C – unsure what you mean. Do I DQ driver with RX for methadone (I do), or should such a driver be DQ’d (No)?

There are many combined questions, where 3 or 4 tests/outcomes are mentioned in a single item. I would rate the most severe, but this could confuse data analysis.

I would like to state that I think it is important that for mid-level providers such as a PA or APN, the physician under whom they are working (if required) should also require training and certification. That is, both the physician supervising and the mid-level provider should have to complete training and certification. If only the physician is trained and certified, the duties of performing the exam on a driver should not be delegated to another provider.

Thank you for letting me take a part in this survey. Some of the questions are difficult to answer. Many answers depend on circumstances. In an idealized situation, the Hx portion would be much longer and detailed. Any significant positive response should be followed by exam with appropriate area. The only non-negotiable exam procedures would be those immediately needed in operating a motor vehicle: vision, hearing, spiral, shoulder, elbow, knee and ankle ROMS. If you have any questions please call me at (415) 706-1920.

I didn’t understand what is meant by “nondiscretionary certification standards” in II.C.1.

The FMCSA should NOT allow DC to perform DOT CMV exams!! Why? DC's can not RX meds - Do not know meds - uses and side effects yet - > 20% of questions/problems/etc. are with meds.
It is useless and makes 100% no logic for a DC to thus perform DOT CMV Exams! Based on 30+ years of MD experience!

The current forms are adequate as is. We do NOT need a more time-consuming history and exam process for DOT certification. Standardization of selected conditions is the only change I would make. I hope this survey and my participation does NOT make the exam process more time-consuming, more orverous, or add unnecessary paperwork or forms!!!! Also, I do NOT think a formal "training course" should be required for a Doctor to do these exams.

There is a lot of stuff we should have to do. It is the DMV's responsibility to make sure of the SPE. The patients PCP should be doing general health care, risk assessment, psych stuff, and patient education. We don't have time for that, and quite frankly, we're not getting paid enough to do that.

A lot of the areas not done by myself, but done by staff (eye exam - urine drug screen, verification of driver etc.) but reviewed and noted by me.

However - many of these task I have not performed so I marked "0" but I feel are appropriate and important for CDL Issuance Eq: UDS.
Many questions pre suppose a standard approach to documentation and evaluation that is not consistent across the country. This survey really seemed poorly written as if someone who didn't actually do the clinical work wrote it question-by-question off the standard DOT form.

Open - ended questions have a lot of room for debate, e.g. "should other tests be ordered when indicated" - there should be more guidance and continuity in determing when it is "appropriate".

Fails to comment on/or explain why no standard exists relative to obesity. Drivers over 35 BMI have increased cardiovascular, musculoskeletal, and sleep related complications. Currently no laws to limit or disqualify if no evidence of existing DZ present. Need a cut-off where BMI Max. (and min?) Set change legally disqualifying benchmark. Other issues also need to be addressed as were.

Questions 83-89: I took this to mean that "I" ordered these tests/procedures which I never have done. I have, at times, requested that a driver be evaluated for such tests/procedures and provide me with results before I will consider qualifying them.

Our practice performs DOT examinations for several National Carriers in the trucking Industry. We follow the Guidelines set up by FMCSA and the Conference reports (several of which are very old and not up to date with current Clinical practice). We are diligent to follow the guidelines and document ancillary info that is important. This survey was quite vague in some areas of what may be important vs. not important. Some may view that everything is of High importance. Some disqualifying DX's are mixed w/generalized statements ie: Menieri's dz, Narcolepsy, Syncope, Seizures, defibulators - this skews answers.

This question should be raised regarding which type(s) of health professionals should be performing these evaluations. Are chiropractors adequately trained in auscultation and dx of significant murmurs and other physical exam skills (the heart and murmur as only one example).

This is a comment not additional tasks. Some items need to be modified: Example: Question 7b - It is not possible to determine cardiac enlargement on a physical exam!! This should be omitted. 11(b) - "loss or impairment" is much more important than "use of orthose's" - they don't belong together.

Should do drug screen on all exams.

A1C for DM renewal Mec < ? reveal.

Survey lack: comments, suggestions, difficulties - from experienced examiners of CMV drivers. Emotional, psychiatric section is unrealistic. Obstructive sleep apnea requires defined guidelines for testing, certification and follow up.

We have a growing population that has Diabetes and Hypertension in the U.S. The concept that treating diabetes appropriately with insulin will force a middle-aged driver to lose his profession and income does not make sense. It would be better for everyone for (diabetics) to be adequately controlled and monitored, yes even with insulin!

Not enough attention to the Muscular Skeletal systems. I have seen Dgm Disc, Congenital Defects Scoliosis on patients and drivers who are lifting and moving and sitting impaired, but who are otherwise the picture of good health. They could drive, but to hook up, change a tire, put on a tarp, strap and tighten chains - means low back impairment and pains.

Guidelines are good, but don't offer enough options to satisfy guides for distance. A driver with an elevated BP who has a BP workup by his primary doctor or that was borderline but not elevated. There should be several ways to resolve problem.

I think there should be formal protocols regarding post cardiac conditions i.e., zero work for 3 months and must have cardiac clearance by specialist.

A separate category for diabetes type 2 that are on insulated would be helpful, there are many type 2 diabetes that are on insulin but do not pose a high risk with driving. Using lantus or lyetta type insulins. Thank You.

Realize that if restrictions are too stringent, commerce will be adversely affected. Some parameters, such as color and hearing are not necessary critical for driving.

Many grouped questions should have been separate. Might ask awareness or experience with special consensus/waivers.

1. Chiropractors lack sufficient training to make these decisions. 2. You need a control reporting office (like FAA) so disqualified drivers do not go to the Doc-In-A-Box clinic down the street to get certified.
3. Medical qualification should be specific to the job, not to DOT driving in general. 4. Medical examiner should be authorized to perform additional tests (blood, EKG, etc) - currently many employers will not authorize this and patients don't want to pay.

1. Requiring annual sleep studies to document good control of OSA is ridiculous and an extreme economic burden to the driver. 2. Whisper tests are a joke. Audiometric testing should be required.
3. Holding up certification because a driver is on an anti-depressant until you get a statement that driver is safe to operate CMV is not justification in most cases. If driver has been on med. for a long time without problems, I think they should be certified. Most are better off with the medication than without it. 4. The "Guidelines" are just that, guidelines, personally I feel they are generally too restrictive and offer "a million and one" reasons to fail a driver.

B. Risk Assessment #3 and 4 should be responsibility of employer and driver.

Many of the questions I answered as a "2" are important, just not necessarily for a DOT Certification requirement - or I though they would be adequately addressed in the actual physical exam (emphysema doesn't matter if a documented 02 sat [SpO2] is >90%). The health education is already being done. Without refining to document what we teach. Only documentation needed is specialist clearance, no need to complicate things with a nonsense

details. If he clears the issue to driver for DOT, that is enough for me. I don't need stress test, echo, spirometric, etc. reports.

This form does not ask questions in an unbound way. All health issues are important, however, the driving physical is not a substitute for care by your primary provider. I fear for the outcome of this study.
The certified examiner should NEVER be held responsible for all of the included information and should be allowed to defer to primary provider as needed. Also, they should not then be responsible for disability if it arises. I do not agree with making providers get "certified" for this as it limits access to care unnecessarily.

1. Knowledge of pharmacology
A - Side effects
B - Uses
2. National database for current DOT physical that can be viewed by current registry members so that drivers will receive proper length physical, to include failures.

Would like more guidance on qualifying renal disease pt i.e., dialysis patients.

Did not like the rating scale used - "Above and below average".

BMI score with a standard for qualified or no.
Neck circumference (with BMI) for screen of SA.
Hx questions re. "Ever received a PPI rating? Other disability rating?
Hx question. . Any impairments/disabilites not mentioned?
List all medications you take on a regular basis.
Statement of understanding with hx ie. I understand if I fail to provide a truthful and accurate medical hx, that this may be grounds for being disqualified from being medically cleared to drive CMV's.

The Medical Examiner should not replace a driving abilities test.

In my position, all medical records are also examined by the MRO and he has the final say who can or can't drive.

Section 2(b) involves a number of assessments that are normally done by the companies to pre-screen drivers before they get tons. Section 1(c) didn't allow me to answer completely. If a pt has hearing deficits on whisper test, we can do audiogram in office at time of visit. Same for complaints of chest pain - would do EKG. All other services - would refer pt back to their primary provider. The companies we do DOT exams for would not pay for all the other testing with a pt's DOT exam - would require pt to get through their health insurance on own and bring supporting documentation to us.

There were a lot of things in the questionnaire that I think are important for medical examiners, but if we reviewed all this info the DOT PE will become a time consuming PE. Unless there is some way to streamline questions and info given to drivers, I don't think I would cover all that for what is being charged for current DOT P.E.

Section 2c: Diagnostic tests and/or referrals. While it is important to obtain this information, it is not important to obtain it directly. (It is, however, important to understand how these indirectly obtained results impact CMV driver certification.)

It seems to me that this questionnaire was just an exercise to validate the existing form. The section on health education counseling is very unrealistic given the low reimbursement. Level for closing this exam. That information should be either self-evident or covered by primary care provider. Another option would be to include a sheet with the information and appropriate check off boxes to tear off the form and give to pt. The section #5 on blood pressure standards is very confusing as written.

Please split polling for specific items of urinalysis - Also, much of the "counseling" is handled through the appropriate waiver - provider.

1. Documentation of tobacco use/abuse.
2. Mini-face (Functional Capacity exam)
Including: 10 push ups, 10 sit ups, 3 standing squats, lumbar flexion - reach fingers to toes
3. Documentation of peripheral vision.

Would prefer to be evaluators not counselors.

I believe the SPE certificate NEED SHOULD BE administered by the medical examiner but the terms, conditions, limitations of said certificate and insurance of certificate possession SHOULD NOT BE the responsibility of the medical examiner! I strongly believe the medical certification process should be limited to MDs/DOs/PAs only!

I would be careful to separate out 1) criteria for safe driving 2) info that may be helpful for a company for a pre-placement exam and 3) medical wellness. I would recommend a system much like the FAA's and think that is best that individual drives do not see their primary care provider for these exams - conflict of interest.

Adequately but currently not done? Tasks and topics are excellent - but some are not available or asked for in the assessment form. Example II.p.6 counseling always done - risk assessment part is p.7-J do not have knowledge or documentation to review driver's ability to drive and take care of trailer etc. Also, I part C. pg.5 Very Important-always included if pt is "our" pt. but if person is in office for only driving PE - diagnostic test results are not available - only PE and person's Hx is taken into consideration. Therapeutic drug levels, HA1C etc. should be part of the records - there should be mandated to attached to application.

Impact of age. Patients failure to report conditions on Hx form. Fear of losing job. "I'll go to another clinic across town and they'll give me a card!"

There are some things that I would have broken out more. I did not consider that I would give the same weight to everything that was lumped together.

1. Provide consequences for failing to reveal medical history.
2. Provide nationalized database for drivers who have failed a DOT exam who then try to go to another provider and then hide history.
3. Need more specific regulations on cardiovascular disease dialysis.
4. Consider separate standards for local/short haul and long haul drivers. Also, small van vs. 18 wheeler.
5. Need stronger standards/more specific ones on a variety of considerations, and stronger support for providing documentation from treating physician.
6. Comprehensive medical training for all examiners.

This was a difficult survey to fill out. Many/most areas are important. I have found drivers who avoid me and employers because I am thorough and will seek out another provider to get an "easy" medical card. I believe more questions with written answers would be more specific. For instance, I don't necessarily believe every driver with a history of stable depression needs to see a psychiatrist every year. A note from FMP would suffice.

I wish the cost of the exam would begin to come close to the actual time and attention actually given and expected by FMCSA. Sometimes not given due to lack of time and pressure from administration and employer due to too much scrutiny and subsequent possible loss of their business.

I didn't note the asking of his/her present medical certification (card) if it as a recert.

Questions weighted toward aspects that we all do. Some questions are dependent on degree of issue.

I strongly believe that ONLY MD's/DO's should be doing these exams! Certainly NOT chiropractors!

If a driver has an exemption it is issued by the state and we don't qualify - the state does. See Section IDA IIA, and same with SPE certificate - state controls. Some of these items are workplace responsibility.

Big difference the question asked vs.
1. Do you think the BP standard, DM standard, etc. are too restrictive not restrictive enough?
2. What standards do you (The Medical provides) think would make our commercial drives safer.
3. How can the process be improved, stream lined, and evidence based?
4. Make the survey available online!

The survey covered the critical tasks. That is not my area of concern. The problems is most everything is "important". The issue is how often is it actually done. How often do some examiners request and/or hold to guidelines especially if they have a relationship with the driver, also some current examiner clarify are not even aware of supporting guidelines! Perhaps a better measurement would have asked "How familiar" are you with guidelines or, "How often" do you follow conference communications, how strictly do you follow recommendation and/or follow upon drivers with limited cards.

But "importance" as a qualifier was hard to rate on a questionnaire such as this. Maybe "frequency" or a different qualifier would have been better for the rating scale.

Institute standard specifically outlining requirements for cardiovascular conditions.

There is a difference between the "ideal" of what I would like to see performed and evaluated on a DOT physician vs. the reality of cost, time constraints, physical environment where the exams are performed, etc. While I, might want more performed, the employer is paying for the exam and limits the amount we can charge and what services we as an Occupational Health Clinic can perform: They will not pay for CXR, EKG/EST, spirometry, labs other than dipstick urine or specialists. We need to refer the patient to their PCP and often they do not have health insurance or a PCP. We do not have access to their results of Random or CDL drug screens

nor skill Performance Evaluations. On the other hand, since we treat their work comp injuries we know there restrictions and impairments and the situations they will drive in/for that specific employer which usually isn't interstate. Remember most OCC Med Clinics and others must complete the H&P within a 15 minute time from and a cost of $55-$75.

This survey is what every examiner should do, off course they will all be checked off.

The exam as now given is well done if performed by the physician in it's entirety. Some however do not perform all of the exam.

C-Should be referred to primary or specialty provider for evaluation and records made available for DOT. I do not order these, but require documentation prior to card being given:
B-11f - cyanosis clubbing and edema - 4, - varicosities 2-3.
Initial evaluation may indicate a need for further testing i.e., elevated BP - fundoscopic, eval, abnormalities upper extremities - strength testing, dexterity testing. I did not understand if ID 3 and 4. I provide information to it to obtain and write card stating needs waiver.

Some of the grouped questions should have been separated for a closer evaluation - you left it up to the surveyed individual to decide within a group if it’s done or not - where very likely on portions of the group are considered.

Some situations may refer to carrier or supervisor, however!

It would be helpful to have some sort of access to report or acquire information on a driver. That way medical examiners, DMV, and/or governing agencies would be able to communicate. We have gaps in the current system, where a driver might be failed by one provider and turn right around and be passed by another if the driver withholds data. We need standardization and communication inter professionally as well as inter agency.

Didn't ask what should be addressed - should have a process to allow insulin controlled DIM, II patients to obtain DOT card.

My many “never performed” responses reflect that as a relatively new examiner I have not encountered that situation, disease, entity yet, or have not had to refer.

This questionnaire so far is a waste of time!!

But some areas need qualification. Additionally, it should be required that the patient be examined by his PCP for conditions and records forwarded. Also rechecks for BPV, blood sugar revaluation should be documented at least once during the cert. period.

After taking this survey I don't believe I'm qualified to do the examination. For consistent standards one should be certified. Personally, I would not pursue this certification.

If you are changing evaluations, I would have the employer comment on job performance and any health concerns.

Get psych from surreal history gatherings.

Questionnaire should also address ability to speak and understand English if not 1st language.

I don't think there should be a certification exam. To make roads safe - be more aggressive of checking for drug use. Medical professionals - such as MD, NPs, PAs, and other PCP's are already trained and certified as competent in taking a Hx, doing an assessment and making decisions about ability to a job. Instructions are in the DOT Exam report. Providers who haven't been trained to do full body assessments and diagnosis shouldn't do exams. The cert exam is a way of adding government oversight. It will also cost providers to get certified in order to support the program. It is getting more and more expensive to keep a primary care office open.

If any further diagnostic testing is needed = should be referred - Driver should then have to produce results or the FMSCA Medical Examiner should receive progress note from the specialist providing clearance. There is a lot of "Dr Shopping". Maybe drivers could indicate to DOT which medical examiner they prefer and continue to be evaluated by the same person.

Somewhat redundant.

Examiner needs training/knowledge of disqualifiers.

Through the years, I've heard drivers talk about certain clinics and providers where they can go and get certified even if previously disqualified by another healthcare provider. This can be a serious hazard, and it's real. I don't have a precise answer, but somehow, a system that keeps track of where and when are drivers certified would help (i.e., all companies, small and large, which employ DOT-certified drivers must send their drivers to a DOT-certified facility/provider).

1. In many cases, we depend on the driver’s honesty, if a driver marks "no", and doesn't list medications, they can effectively hide medical conditions. If they don't see a treating physician, no one would know. I'd suggest a digital card with their medical info embedded. Examiners would be given scanners to read (and protect) the info. The software apps the certification, so you'd have a running tab of not only their medical conditions but also certifications in the past. This would help the honesty issue. In the current system, we find problems after an accident occurs. 2. Add objective data for sleep apnea in all exams. 3. Ad pulse ox/exercise if CV/Pulmonary selected.

The survey instructions are confusing. Am I rating, listing the tasks I DO or whether they are important to do (even if I currently don't do them)? Importance scale says "how important in this task for competent...yet one of the options is "never performed".

Note: Sect 2C: I often do not perform the epha testing (like a STET, EKG, lab work, etc.). I refer the driver back to the PMD and request copies of the information.

The exam should specifically test stair-climbing cardiac guidelines should clearly indicate how frequently to get EKG’s and stress tests.

Not convinced longstanding monocular vision should require waiver. Not convinced methadone use should be absolute disqualification, but we do clearly need more straight guidelines regarding opiate/Gunzo usage.

There are many tasks I have “never performed” but I think are “very important”. To perform when the opportunity presents itself.

Many of your questions are not realistic.

Tasks are fine – but the problem is that if or ME disqualifies a driver, the driver goes to another ME (who may not be conscientious or driver lies!) and gets disqualified. There is NO mechanism to notify DOT that driver has been disqualified. There is no quality oversight of MEs who have NEVER put a hand on a patient and never asked the patient a question but pass the patients DOT for 2 years. WITHOUT oversight of MEs NO certification will improve road safety.

I disagree with disqualifying a driver based on medical condition especially if the driver is compliant with treatment and follow-up. This driver requires closer supervision to ensure optimum level of functioning and ensure public safety.

I would be curious about examiner's rate of certificate denials and top causes for denial.

I do not believe chiropractors are qualified to provide a medical opinion. Training of chiropractors is not directed to evaluate the need for or use of medications. Inadequate training in medical treatment of cardiac, pulmonary conditions or the consequences of internal diseases. Many criteria for DOT disqualification is outside the scope of training/practice of D.C.'s.

Item B, includes some points that are very important for CME accreditation and some that are much more of the employer – much as ability to tie down, operate trailer functions while stopped.

I must admit that the risk assessment (job description) has never been offered or included with a CDC pt. I believe most feel very inadequate in this area as well as FMCSA guidelines. Our practice does not focus on specific occupational/ergonomic practice/effect.

I never check ID unless doing a drug screen – but I will start doing this immediately.

Adequate but questions referring to additional sleep study, labs etc – they are times this would be critical and other times not so critical. Hard to give answer w/o a definite set of symptoms. Comment- Think it would be great if NIDDM drivers brought documentation of blood sugars and most recent HbgAIC.

If a driver is epileptic or diabetic and has been well controlled on medication (without adverse events) (s)he should not be disqualified, or need to test every four hours while driving. Drug levels and Hgb A, C's at q 3 month intervals together with regular check ups should be sufficient. Methadone treatment should be considered as a rehabilitative measure and if the person is committed to changing and improving their life, it should not disqualify them. All methadone programs require monthly and previous drug screens, which could be a requirement.

No ut. Criteria or risk factors associated with ut. was included.

Many of questions involve tasks performed as part of evaluation, but not necessarily performed by the examiner. History can be asked, but not always be verified. Physical requirements differ for some drivers and need to be company based depending on driver tasks required. Risk Assessment/Education should be included in driving training renewal/classes not "performed" by medical examiner – only reviewed for driver understanding. Medical Response/Referrals should go back to personal physicians to address with drivers.

While I rarely order labs, I require drivers to bring in records from their treating physicians concerning their disqualifying condition.

My concern is if put into practice many of these things can make the exam difficult to complete in a cost effective way. I would also face limitation to those receiving the exam.

I am often worried about examiners that certify drivers who don't undress individuals. I also think that we should have a tracking system for those who are applying. I had one patient who was not qualified because of sleep apnea – he went to another MD and got certified because he did not put on his paper work.

I would take away some aspects you have surveyed. It is not realistic to expect a FMCSA clinician to serve the role of primary care physician and overseer of health. It is not realistic that all of these important features can be covered or the amount of time and reimbursement of a DOT exam.

A DOT physical should not be a replacement for primary care MD. We should not be ordering diabetic test. We should do standards and pass or fail and plan follow-up!

We need to develop more specific cardiovascular parameters. I think a coronary calcium score would be very useful.

Using prescribed narcotics should also make a driver ineligible to drive.

Detailed issues regarding certification for drivers with elevated blood pressures and/or a diagnosis of HTN with normal blood pressures.

I strongly believe that Chiropractors not be allowed to perform DOT physicals! They do not have proper medical training to recognize, treat and council pt's with varied diseases!

Some of the tasks grouped together do not have the same importance level, for example some don't load and unload alike.

Some overkill.

Much more on risk assessment/job specialty.

Please add any previous surgery. Most of the drivers do not tell about it.

Questions should have been asked about referrals to other health practitioner when DOT exam limits are not met or if current condition dictates opinion of specialist. I always ask for a letter from Specialist specifically stating the care given, diagnosis and restrictions if any for driving.

When the driver has no insurance how are all necessary tests/referrals paid for? The examiner needs access to previous medical records to perform these tasks. A 50$ occupational health CDL, without records is NOT adequate. After 40, the CL should be annual. The forms do not specify that many of these tasks were included. Drivers yield to dispatchers and employers who ignore reasonable breaks, nutrition, exercise and stress as significant risk factors. I do not agree that chiropractors are qualified to do the CDL. When a crash occurs are prev. CDL's analyzed? Smoking assemnt/RX - lipid profile every 3 years, chest x-ray and EKG after 40, Hemacult-blood in stool.

It was unclear whether you wanted us to indicate what we actually do or what we believe we should do. I imagine there is a bias to make it look like we do more than we do. It would be nice to have some evidence - based info to go on - eg. What medical problems actually lead to accidents - not just which ones we think may lead to accidents. Is there a registry of the cause of accidents?
Health Education Counseling - This should not be our job. The employer should do this or, if an independent driver, he/she do continuing education.
Risk Assessment - The employer again should do much of this. How are we know what all is involved in the mechanics of trailers and hitches??
This is too time consuming and listening to me preach is not likely effective. Perhaps FMSCA should do his in a standardized fashion - w web cast with a post test.

1. Need to address who will pay for addl specialist eval and/or testing (eg. sleep studies, EMG lines, even EKG or spirom. 9a. asks about GI concerns - who would work that up??
2. Many of these multi-choice questions have choices which are very different in their importance, eg. IC2, II A.3. and especially II B 1.
3. Many of the items in IIB are more properly pre-placement issues - not driver SAFETY issues, or are widely speculative, eg. II B 3, 4, 6,7.

I think the most frustrating part of the DOT is it is self reporting and drivers who receive restrictions - provider shop around for more lax providers to get a 2 year card. I also believe BMI restrictions should be in place. Education to the drivers on weight, cardiovascular risks and employers to be more proactive and not restrict further testers without their express approval or they won't reimburse costs.

The survey asks if it's important not do we actually do it. We spend very little time on risk assessment and ability to actually perform duties. The reimbursement is inadequate and we have to assume they do not need a doctor to tell them about real performance issues. Also, I assume the CDL exam (Wr. Hea test) has some screening value for cognitive issues. I really wish there was a "nondiscretionary" ceiling in BMI, e.g., 35 or 40 so it takes some judgement, subjectivity out of it.

Consider the need to contact the driver's employer (motor carrier) regarding disqualification issues. Consider testing for controlled/illicit drugs when indicated by history/examination.

Mirror evaluations what we currently do in practice is not enough. We need to have thoughtful discussion about what the best way to handle a given situation. There is a serious lack of uniformity in how these exams are performed.

Question #93/#94 I feel if a driver has a major health concern and has seen a specialist, it is up to the specialist to determine the eligibility and any time-related restrictions for driving. I feel the survey covered many important things, but lumped some unimportant and important categories into one. Also on the medical exam report, the blood pressure categories are ill-described regarding the expiration and recertification requirements.

The wording of the questions such as nondiscretionary and the grouping of symptoms or diseases affected my answers. Some I would rate higher than others in that category so I had to compromise my rating. I do not feel that is should be the examiner's responsibility to evaluate if the person can load or unload freight or change the tires. That should be trucking co. responsibility. We do DOT PE for numerous Trucking Co. and driver's responsibility varies greatly. Also, my time and ability to assess a person's cognitive ability to read maps etc is

limited. It should be the trucking Co's responsibility
unless it is a major deficit.

A number of questions involved too many elements.

An FCE can be utilized in place of a SPE with documentation in the chart as per. Kevin Berg at the SPE office.

There needs to be a mechanism by which a failed examinee is reported to not only the employer but a governmental/DOT agency. Too often, a failed "good employee" is sent to a different health care provider by the employer with the hope that a less-thorough examiner will pass the employee. The best exam and examiner's work are easily and quickly defeated by a less thorough or unraveling examiner. There must be a mechanism to report medical failures. There should also be field surveillance to ensure that providers are performing the appropriately thorough exam. Too many current providers check off normal or never even performed the exam.

I thought the questions would be geared more toward diagnosis and health of the patient and not line for line what is already required to be performed from the Medical Examination Long Form.

Section 2C1 not clearly stated by my reading(s).

Those that had multiple questions in one were sometimes hard to answer - some problems I deem more important than others, but they were "lumped together".

Should separate items for individual ranking in: II A 3, II B, II B4d, I C 2. Some items checked "never done" because situation hasn't occurred, not because I think not important.

Roles are adequately. Inadequately - issues that are still waiting to be addressed by system (problem cases). Clarification that many of issues eg. length of certification for specific conditions (e.g. controlled non-insulin diabetes), 2 hr of past Meth abuse, are not specifically defined at this time. The requirements for "examiner" documentation/referral systems within FMSCA need to be defined e.g.

The medical requirements for different classification of licenses. (Class A,B) endorsements. Are there different or restrictions for older drivers with muscular/skeletal issues. Strength/endurance access to local/regional skills testing facilities.

Fasting or random glucose. HgbA1C and should define what is considered acceptable HgbA1C in diabetic (i.e., stability = HgbA1C < 7.5, etc) - very similar to BP criteria. Also, need to require treatment records from practitioner tending. DM to ensure driver isn't omitting Insulin as a medication.

Too many items clumped together in questions, then requiring just/answer - when different parts of question warrant different responses. Should have areas for comment.

Skill performance evaluation would be difficult for medical examiner and should be evaluated by driver examination such as when obtaining license.

Would like to see a computerized system like FAA uses - at present a driver with a disqualifying

condition may go elsewhere and get qualified if he lies etc about the condition.

While we endorse preventive measures, they have no meaning on current fitness to drive. Also some "admin" functions could be handled by the employer, safety offices, or DMN.

My experience is that not all examiners take this exam seriously and some perform it rather perfunctory. I support wholeheartedly a Certification Exam.

I would like to stress that I feel it is important if not critical, that sleep apnea be addressed (better on the form) possibly including the Eppworth Sleepiness Scale). Also, the BP rules are not clearly defined on the form for recent vs. new cert exam.

? About skills testing. I do assess physical capabilities, but the actual test, I do not think is a "medical" determination, or at least "General Medical". It may be more appropriate under an Occupational health "hat".

1. Chiropractors are not competent to do this - inadequate training. 2. Examiner must be able to order additional tests - currently nobody wants to pay for them.
3. Drivers who fail can go to get certified - National driver registry and reporting center are needed. 4. Abuse of prescription drugs is a serious problem DOT does not address. 5. Employers tend not to care about this process and just want everyone passes without questions asked - at low cost.

Good review - remember not to make the DOT too long. "Are they safe to drive?" - Not "are they medically fit in all areas?"

On some level all of these items could be ranked "high" importance. Some illnesses (thyroid) are less likely to cause "sudden" incapacitation so were ranked 3 on scale of 1-4 but all items should be evaluated by H and P at least. Dx testing and/or referral are then targeted.

I do not believe anything should be added. I think it is a good tool as it is, in the hands of the right examiner, one who takes the time to take a good history.

1. I know this is Federal, but you need some coverage of state specific issues and especially their proper documentation on the often used Federal card and form (e.g. Intra State Exemptions). 2. Some combined items include High Import and Low Import together but one response.

Can’t believe FMSCA allows chiropractors to do these exams. They have NO training or clinical ability to apply these necessary standards!

Basically, all of these items are important, so I am not sure how this data is going to be helpful, but I hope it is.

I believe C and D coincide with each other if you are going to do the testing needed then all the results need to be documented in the file with (C) Diagnostic tests
(D) Documentation of ancillary info.

Any work related injuries? Ever failed a DOT drug or alcohol test? If yes, did you complete SAP Eval – Documentation? Should document BMI (wt height chart). Use Mallaopati scale for size phargox (OSA documentation).
B12f – Babinski – Pretty much worthless to do.
B14 – Items should be noted if detected by talking with driver.
C1g – Company's will not pay for this – driver should bring from PCP.
C1h – Overnight 02 saturation – low cost way to detect OSA!
3a SPE – Most orthds and physicians have problems with SPE.
Sect 2b1, 3 – Should be employer's duty.
Section 2C2C – Even legally prescribed Narcotic Substances usage violate most state laws of driving while under influence of a substance! This is a problem how the Rules read and is a conflict of DWI laws! This would be like asking a doctor to say "It is Ok to drive after 6 beers that doesn't seem impaired!"

I'm disappointed. 1Ag – pretty dumb to use Discordia labeling.
1A m and n – Should not be lumped.

Deep tendon reflex checks. History of asthma, COPD.

Our clinic refers to PMD for all ancillary testing, so although we do not perform the test - does not mean that it is not requested with results and opinion from PMD or specialist.

Lumped things together, 0 most important, not important, 1 essential.

Time factors for completion of exams.

I had some trouble/confusion answering questions. Some confusion on what tasks I actually perform, office staff perform, and importance of tasks. A lot of the tasks are important, but time limitations do not allow to cover them all.

Question B.1. - Driver should be disrobed for the physical exam.
Question C.2.b - Alcoholism is a lifelong diagnosis. An alcoholic may be considered qualified if he/she can show evidence of current alcohol abstinence.

It groups items together that do NOT have equal weight/importance and ask for a response about the group - individual responses would vary. Also, legally the presently outdated concerns recommendations are looked at a legal standard by the legal community. We need a more definition position regarding their tone strength and how we should use these. As someone who has performed military examinations and Class I Airman medical examinations I see no reason for the ambiguity and variation allowed in the CDL certification process.

Risk assessment B 7 - I don't understand the question.

Suggestions for completing form after referred for specialist clearance. List of acceptable forms or test results to include. Information on how to obtain specific waivers.

1. I'm an Ophthalmologist; your form should be specialty specific. 2. "Horizontal vision" should be replaced by assessment of peripheral vision - nasal, temporal, inferior, superior, bilaterally (each eye separate).

Identify specific blood pressure cut offs for action and intervals of certificate periodicity. Identify criteria for identification of risk for sleep apnea and appropriate referral.

Some tests are absolutely critical such as cardiac function assessment and HgA1C in diabetics, but are not done on drivers without these conditions. A separate question frequency of test performed should be obtained also. I only put never performed because I have not had a driver in these categories.

The Whisper Test is inadequate.

Don't ADD anything - too long to think clearly throughout it all.

Examiner should not be responsible for health care.

1. Survey OK. 2. Ease of use of website, commonly seen instances of driver evaluation circumstances that require refinement in decision-making process, FAQ's, a PRINT resource for definition of standards and guidelines would be greatly appreciated to minimize variation in application of standards by various healthcare providers.

Depending on the State, medical discretion is difficult without a firm legal/medical basis for your decision. Legislative requirements are much easier to apply in this setting rather than medical discretion. A sound evidence-based medical support system is needed in order to disqualify individuals on the margin.

There should also be an "average" response. Skips from "below average" to "above average" with nothing in between.

Section C Q1: Hernia disqualifying? (Inguinal)

Adequately - OUTSTANDING

Auscultation for certified bruits.

Cell phone usage guidelines must be strict.

II B Risk Assessment. I assess ability to drive, not unload/load, couple/uncouple.

We also laminate the card to prevent unauthorized changes.

What are the identified leading causes of accidents and what specific H & P items relate to them? If absence of the Lt. IV finger is not one of them why would I be concerned with it? If drug abuse is the issue stronger emphasis on screening, counsel, treatment. Drug/alcohol users will not give accurate answers to your questions.

When SPE certification is felt to be necessary based on impairment/loss noted on extremity exam, I usually leave it to the driver and employer to contact state FMCSA/DOT for the SPE. I will qualify the driver WITH SPE certification if there are/is no other disqualifying condition but do not ask to see their SPE certificate prior to qualification with SPE certificate.

Though the survey was very thorough, there are certain areas that as medical examiners we can't do (e.g. instant drug test). Many times we see driver just once and it's hard to do follow up

care. There are certain parameters that ought to be less limiting CBP Hx for example). Perhaps this is not the place to include these comments since this is regarding the survey and not the FMCSA Medical form.

Make it mandatory that a physician notify DMV on Class A/B patients with candidates being treated that concerns their professions. Then the driver must bring in printout from DMV on health history for certification/recert exam. I can only go by what the driver writes down on form unless I catch it on the exam. But if the medication is working properly I would never know of any acute or chronic conditions.

Why is DOT concerned with the driver's ability to load/unload a trailer or cover a trailer with a trapaulin? Is this not an employer/employee issue?

Mandatory Certification of Examiners I have personally had drivers who have been issued cards when they should not have by providers not familiar with regs. i.e. monocular vision and IDDM.

Like pilot physicals, we need a central certifying agency we can defer to - so that agency can be the "bad guy." Many of these truckers are our patients. I have no qualms about D/Q a driver, but many of your potential examiners might. This agency would also prevent Dr Shopping - failed exam here; go to another Doc.

One of the biggest problems to address is not further limiting qualified examiners, but stopping less scrupulous providers from simply signing the forms without even doing the exam. Next is how to administer such a comprehensive exam to a population of patients that often has many medical conditions requiring treatment during the same visit in an era of managed care time restraints.

If a more structured system is to be implemented, guidelines on what test/procedure is needed to "properly" complete the examination should be defined in more detail: i.e. strength/coordination assessment, lower extremity states, upper extremity/hand assessment, back/spine function. What about the issues of genitalia, communicable disease, exam? In response to the "importance of", too many of the Q's included low priority with high priority/risk (ie, general GI and threatening hernia). I see a question as to whether there needs to be a "tiered" level of "routine" exams/examiners vs.
"special" exams/ers (where special would, re-evaluation of disqualified, substance abuse, DM, etc.)

The survey was very comprehensive. I had difficulty evaluating most items at less than "4". Thank you for all your efforts.

I really don't feel this helps with what you're trying to find out. The physician needs to know what conditions affect a driver ability to perform safely. History is the key element with a PROBLEM oriented exam, except for basic screening such as vision/hearing etc. The obstacle the physician encounters is when either the driver or employer push to pass the exams. Most physicians are not going to not pass the driver and objective criteria need to be used. Because issue comes up like "how obese" is too obese"? How short of breath is too short of breath? How big does a hernia have to be to be a problem? If they are doing their job now why can't they continue etc?

Redefine #143 - there are occasions to allow certifications for short time period if not life threatening eg. hearing test result. #27 Is the most important at this time.

Add - practitioner should evaluate BMI.

I feel that the FMSCA examination too often becomes the only medical examination a driver may have every two years. It may be more appropriate to require a pre-examination from a healthcare provider who regularly offers care to each driver. It is impossible to verify the truth of information provided by someone whose job is on the line if he/she fails the exam. It would aid those who become certified if they had a general health insurance from the driver's regular healthcare provider.

Too much authority given to designated medical field examiner. As a pilot, I know the FAA takes a key central role as medical clearing house. The FMCSA needs to publish standards to drivers clearly so they know necessary physical qualifications. The FAA does this for pilots - why not CMV operators?!

Regarding effectiveness of survey - note that never having performed a task doesn't mean it's not important - I've never had the opportunity to disqualify a driver due to methadone therapy or alcoholism - this doesn't mean I wouldn't do it if presented with the situation. Likewise, I've never dealt with SPE cares.

1. Health History - Questions for Women Drivers - 1. Are you pregnant? 2. When was your last menstrual cycle? 3. Are you allergic to drugs?
2. Medical Certificate - Needs a place to notate reasons for temporary certification (example: increase BP 92, glucose in UA, etc.). This way medical examiners can ask to see previous certificate and know if the driver was given a temporary certification and why.

Too general. Questions difficult to answer using scale given.

Actually, it did a reasonable job of assessing what should be done. What it did not in any way assess is what is being done. This was a waste of time.

Examiners should be thoroughly knowledgeable of the critical elements and job functions associated with commercial motor vehicle operators. Examiners should be able to discuss certification criteria with the transportation company officials, dispatchers and other supervisors.

There are tasks that I cover with the driver on the assumption he provides the correct history. Is it our task to review the stressors of driving with the driver or the employer's task? What stressors, if identified – would be disqualification?

Need to observe coordination and speech pattern (72), but not by Romberg (which checks Cerebellum). Blood analyses are mentioned - I would do toxicology only (bad exposure).

D-Documentation goes without saying, but documents can be kept in physician's office. "If you didn't write it, you didn't do it" is always the rule. Don't add a place to the form where we have to write it all in!

More information and questions needed. Blood thinners; ask pt if on any meds, I think it is important to have the driving understanding of the consequences of hiding information in order to obtain a license. I think the current exam questionnaire is adequate. Maybe need a Q about correct medication.

This survey Item II B. Risk Assessment places much responsibility of evaluation of risk for task performances, which should be an evaluation by DMV, (Dept of Motor V.) through task specific evaluation and certification. It is difficult for a medical provider to evaluate a driver's ability to perform tasks.

We need a system for medical providers to report to the DOT whenever drivers develop a new diagnosis that would disqualify them until further evaluation. (ie. driver seen in ER for syncopal episode that needs further evaluation, new on set of uncontrollable diabetes, etc.).

Note: Some questions are ambiguous or contain too many items, i.e. I can perform on EKG in any office but not treadmill, ejection fraction etc. I would consider a history of brain tumor very important, but other concerns less go.

Monitoring random blood glucose levels.

Neck size - a strong correlate of obstruction sleep apnea - should be measured.

I feel that the rules and regulations aren't specific enough. I find them confusing and poorly outlined. For example if someone has carotid bruits or Abdomen bruits are they disqualified, 3 month card or what? I think we would all benefit from training on the guidelines of what passes, fails, and all the grey areas.

I feel the categories were very thorough in what is needed to perform these physicals to the DOT standards.

On question 122. I do not know of anyone locally to do these. voc rehab full. Question 2 on page 9 - This question is confusing and vague. Recommend ranking importance from 1-7.

No questions about qualifications of examiners.

Section 2 Part B - Question 31 - I understood the question to mean the driver must come to the clinic "properly clothed" for the exam. In which this is arbitrary in that we can gown them or properly prepare them. Therefore I answered "low importance" because it is not that important that a driver come to the exam "properly clothed".
Section 2 Part B - Question #2-D - Although I feel that this is somewhat a "loose" question. I have examined a few color blind patients that have color recognition in that they can determine the difference between shades of green, yellow and red.
Section 2 Part B - Question #1,3 - Okay, where do we draw the line? This is the job of the Dept of Motor Vehicles.

Demo #1: Which of the following is your profession?

Family Nurse Practitioner
Naturopathic Physician – (2 Responses)
N.M.D.
Occupational COHN/CM Manager
Occupational Med Specialist
Registered Nurse
R.N.
RNP
Student Naturopath

Demo #3: Which of the following best describes your primary job function?

½ clinical and ½ admin – (3 Responses)
½ clinical – rest administration and education
Clinical/Consultant
Clinical Medical Practice
Clinician
DOT P/E's only
Eval and Tx
Manager/Provider
Factotum
Medical
Owner/Physician
Physician
Primary Care
Treating Physician

Demo #4: In what type of healthcare environment do you work?

Ambulatory Occupational Medicine Clinic
Cardiology Clinic
CHC
CHC Mobile Clinic
Clinic (8 Responses)
College Health
Community Health Center (6 Responses)
Community Occupational Health Clinic APNP Drivers
Company Occupational Health Clinic
Concentra
Consultant Services (2 Responses)
Contract Physician
County Health Department (2 Responses)
DOE Facility
Emergency Dept (3 Responses)
Employee Medical Clinic
Employee Setting
Family Medicine with Urgent Care
Family Practice (2 Responses)
Family Center – Primary Care
Family/Occupational Medicine
Family Practice
Federal
Federal Clinic
Federally Qualified Health Center (Rural Health) (2 Responses)
Free Standing OCC Clinic (3 Responses)
Free Standing Occupational Medicine Center
Government Agency (2 Responses)
Health Dept
HIS Clinic
HMO
Hospital - Affiliated Occupational Medicine Clinic
Hospital Based Clinic
Hospital Based Industrial Clinic
Hospital Based Occupational Health Dept (2 Responses)
Hospital Based Out-Pt City Hosp
Hospital Clinic (2 Responses)
Hospital Occupational Medical Clinic
Hospital Outpatient Dept (2 Responses)
Hospital Outpatient OCC Health Clinic
Hospital Outpatient OCC Med
Hospital Owned Occupational Health Clinic (3 Responses)
Hospital Owned Practice
Hospital Satellite Clinic - OCC Med only
IACOHC
Indian Health
Industrial Clinic
Industry - Audit other doctors doing the exams
Industry – off-site
LDCUMS
Local Government
Locums Tenem
Medical Direct – available
Mixed Urgent Care/Occupational Medicine Practice
Multiple Site 50% office and 50% Industrial
Native Clinic – Family practice
Office Based – 2 MD's
Occupational
Occupational AL
Occupational Clinic (4 Responses)
Occupational Clinic with Hospital System
Occupational Health (19 Responses)
Occupational Health Center

Occupational Health Clinic (34 Responses)
Occupational Health/Walk-in
Occupational Medical Clinic (30 Responses)
Occupational Medical Clinic (Concentra)
Occupational Medical Practice
Occupational Medical Specialty
Occupational Medicine (13 Responses)
Occupational Medicine Clinic (9 Responses)
Occupational Medicine Group (3 Responses)
Occupational Medicine Partnership
Occupational Out Patient Clinic (3 Responses)
Office of Exams & Drug Screens only
Off-site Clinic owned by hospital – one of 5
Out-patient clinic-Government
Primary Care Clinic (3 Responses)
Private Practice
Public Health (City)
Retail/on-site
RHC – only provider on-site
Rural Family Practice
Rural Family Practice/ER
Rural Health Care Center (3 Responses)
Rural Healthcare Clinic (19 Responses)
Rural Medical Center (2 Responses)
Satellite Clinic
Satellite part-time
Several of the above
Solo/onsite
Teaching Clinic
UHI Primary Care Ctr
Urgent Care
Urgent Care and OCC Health - (2 Responses)
University Medical Center
US Govt Postal Service
VA (2 Responses)
Worker's Comp
Work/OCC Health Clinic

Demo #8: Did you take your course from any of the following organizations?

AAFP Meeting
AANP (3 Responses)
AAOHN National Conference (3 Responses)
ABIME
AM ACAD Orthopedic surgeons
AMC Testing
AMC Testing (American Medical Compliance) (2 Responses)
America Academy of Nurse Practitioners
AOHN
Certified DOT Inspector
CEU
Chiropractor Continuing Education
Class at work
Classes to Director
CME Local Medical Groups
Continuing Education
D.C. Taught
DOT Train Physician
Dr. Mike Megehee Class at Western States Chiropractic College (3 Responses)
Drs. Smith Chandlier, Greg Bicrnacki, Riverside Health Newport News, VA
Duke - OHM Certificate Program
Duke University
Duke University OEM
Flight School – US Army
Florida Chiropractic Association
Florida Chiropractic Association Seminar
IL Chiropractic Society
International Academy of Chiropractic Occupational Health Consultants IACOHC (2 Responses)
JJ Keller Fleet Safety Compliance Manual
JJ Keller, Inc.
Kaiser Occupational Health
Kentucky Coalition of NP Conference and DOT exams.
MARCOM Mid Atlantic Region Conf for OCC Med.
Medical Examiners (NADME)
Mount Sinai Medical School online course
NADME (5 Responses) (National Academy of DOT Medical Examiners)
NADME online
National Academy of DOT (medical examiners) (2 Responses)
Natalie Hartendaum, M.D.
New Hampshire Nurse Practitioner Association
NIRSAT
Northwestern College of Chiropractic and Occupational Training
Northwestern Health Science University (7 Responses)
Northwestern Health Sciences IACOHC
NP Conference
NRCME
NYSPAA Conference
Occupational Health and Rehabilitation

Occupational Health Clinic Conference
On-line
On-site Physician
OTJ Training from Supervising MD
PA Training
Part of US Health Works
Physician & Drug Mgmt Svcs
Private/ALA
Privately sponsored by Artel Medical Center (Clinics in truck stops-not open anymore)
Residency (2 Responses)
Residency Training – (2 Responses)
Review of the FMCSA National Registry
TN College of Occupational ENV Med
TSA Training
TX Chiropractic Association – (2 Responses)
Senk Conference 200
University
U.S. Navy
Western States Chiropractic College (3 Responses)
WSCC Cont Ed.
WSCC DOT Seminar

I have read Wittels entire book and had infinite informal discussions with other physicians.

How to become the Company Dctr.

Concentra is not qualified to train anyone to do a DOT PE. In the Rich. Va. area Concentra does not require the pt. to wear a gown for PE. Numerous patients who have had past PE by Concentra tells us that their PE by Concentra is extremely limited to heart, lungs, bend over and touch their toes.

Demo #9: To what materials do you typically refer when performing a physical exam for CMV drivers? – GENERAL (Option 7)

49 CFR 391.41 Physical Qualifications for Drivers (8 Responses)
1 call our local medical liaison at DMV
AADHN
ACDEM Training Manual
ACOEM (9 Responses)
ACOEM Web site
AFP Website
AMCT
Back of DOT form (2 Responses)
BATES Physical Exam (3 Responses)
CA DMV
CA DMV Medical Guide
CA DMV References
CALL to DOT Medical Certif. Division (2 Responses)
CANADIAN (CMA) determining fitness of driver (2 Responses)
CDME published by AECOM (Edit N. Hartenbau, MD)
CDME Review (ACOEM)
CDME Review (2 Responses)
Clinical Protocols (ours)
CMA (Canadian Medical Assoc) Guidelines
CME Newsletter by ACOEM
CMDE updates from ACDEM
Collaborating MD
Colleagues (6 Responses)
Company Guidelines/Internal Memos
Conferences
Consultation with Supervising MD
Contact DOT CMV division via phone
Currents: Occupational and Environmental Medicine - 3rd Edition
Detailed Register References on DOT exam form
Direct calls to FMCSA office in Washington (2 Responses)
DMV Exam Forms
DMV Web Site
DOT Exam Form Instructions (2 Responses)
DOT FHA Criteria and notes by MD from training/Office Manual "Medical Guidelines for
DOT Exams"
DOT Form (20 Responses)
DOT Form or call DOT phone #
DOT Newsletter
DOT Reference Sheet
DOT Regs
Duke Internet News Group
Duke OEM
Examination Form itself (2 Responses)
Evidence – Based Medicine
Family Medicine Reviews
Federal Motor Carrier Safety Regulation
Fleet Safety Manual
FMCSA (3 Responses)
FMCSA Conf Reports
FMCSA Rules – Regulations (Responses)

FMCSA Web Site (3 Responses)
Form brought by Pts
General Accepted practice guidelines
Google DOT
Guide to PE by B. Bates
Guidelines that are on form (4 Responses)
Hartenbaum Website
IHC Manual
Industry Job Descriptions
In-house Documentation
In-house OCC Health Specialists
Instructions to Medical Examiner attached to Med Exam report form.
JNP
KY Transp. Cabinet Medical Exam Report for Commercial drivers-Fitness determination
Lange's Review: Occupational Medicine
Licensing Form
List-serv discussion group
Literature
Local Authority
Medical Examination Form (8 pages)
Medical Examination report for Commercial Driver Fitness Determination
Medical exam itself
Medical records
Michigan Trucking Association
Monitor OCC Med Internet site out of UNC (moderator-Gary Greenburg, MD)
My Medical Director
National Diagnostics – Compliance, Mike Wall, RN
N. Hartenbaum MD
NIH Web site
NIP Continuing Ed
NYS DOT
NWHSU materials
OK and Australian Guide
Other Physicians other then Supervising Doc
Personal Ref Books
Point Physician in Organization
Pre Printed Forms
Prior CME lectures
Professional Journal Articles
Pub MED
Seminars
Specialty Conference
Standards from other Countries/Jurisdictions
State DOT (3 Responses)
State DOT Employees
State DOT office
State FAP-II
State/Fed. DOT
State Regulations
Supervising MD (3 Responses)
Telephone DOT office (3 Responses)
Texas OPS Guidelines
US Naval Regs
Uphold and Graham
WA State CMV Form
Wittels is 10x better than Hartenbaum (I've been doing this job for 10 years).
Any Necessary Resource

Demo #9: To what materials do you typically refer when performing a physical exam for CMV drivers? – FMCSA (Option 15)

49 CFR
Any Necessary Resource
AMCT
Application
Colleagues (4 Responses)
Company Regulations
Consult with Board Certified OCC Med Physicians
Continum Health Care Solutions
Don Egli @ IMTA, Shirley McGuire
Dr. Hartenbaum DEM list
DUKE Occupational Medicine Forum
E-mail to FMCSA
Guidelines on DE Form
Husband a Supervisor for Major Bus Company
Literature
Medical Conference Reports Recommendations
N.Y.S. Laws & Regs School Bus Drivers
OCC Med Dr.
OEM Chat group
Physical Form
Professional Journals
PUCO
State of CA Med Exam for CD - Guide for Physicians
State/Ed. DOT offices
Subject Matter experts
Supervising Physician (2 Responses)
Telephone support to FMCSA
Wittels is far better than above "Legalese" (I've been doing this job for 10 years).

General Comments

Just a comment – Whenever I have to call the DOT CMV Division for assistance/clarification of a particular problem encountered when doing a DOT physical, I invariably get different answers from different individuals I speak to. This is frustrating when trying to ensure proper documentation +/or practice. Also, no way to regulate, recertification intervals unless one requires copy of last physical is brought in with driver.

Page 9 – Question 2:
Zero for I.D. – The front desk is trusted to do this, as they should be, after all, they appropriately manage people's SSN's, etc., in all medical offices.
I am board – cert. As a physical medicine and rehab M.D., so our fundamental outlook is "function", incl. prioritizing the most relevant/impt. Parts of the history and physical. If I can help further, please let me know.
Eric Morse, M.D., Lexington, KY, 859-253-0076.

Page 5 - G. (Never) leg length discrepancy
13. (No) gravity, protein, blood (yes) glucose
C - c. (No) creatinine, electroyles, (Yes) toxicology, (No) lipids, blood chemistries
C - g. These drugs shouldn't be used - other more appropriate meds available.
C - h. What tests?
Page 6 - 6 - a and b MRO responsibility
6b. HIPAA concern
Page 7 B. all of 1 - Not related to ability to drive. Work place requirements.
Page 8 C2b. (active vs recovering?)
2c. MRO role

Indiana is one of the only states that have a medical board that reviews medical certifications examinations that are brought to its attention. I think this entity is helpful and takes the potential political aspects of deferring drivers out of the equation.
I think drivers should carry a card showing any medications they are taking (name, dosage, and frequency) and the name, address, and phone number of the prescribing physician.

This survey was ridiculously long and overly detailed! A much shorter survey would have been just as useful. PA in NY

What is this? A math test??!

On page 8: C2b: Has a current clinical diagnosis of alcoholism IF DRINKING.

Comment/Question: When does false or misleading information from a driver invalidate the exam? Always? At discretion of examiner?

Why not adapt PAA standard?

On page 10-Question 6 - Aren't you curious how many are board-certified?? (I am, eg)

General Comments: DOT needs to be more specific in several areas. Hartman's Book is very good. However, when using her guides they are not printed in the DOT standard. We need to have answers on waivers - are they for real or are they a myth. Diabetes - should have a actual % on A/C to be allowed to drive. Insulin pump after 6 mo. of successful use should be considered. No driver should be allowed to drive while on narcotics or controlled substances

whether legally prescribed or not. B.P. needs more work instead of stage I, II, and III - these are very unclear. There should be a very standardized FCE for the industry. Medical records from a physician stating an individual can no longer drive a truck need to be kept in a DOT registry so drivers don't shop for a doctor who certifies them. The whole DOT standard is very good - it just needs some fine tuning and examiner certification. Dennis Frinzl PA-C, 4450 St. Clair Ave, Cleveland OH 44103

Next time print in black or dark blue so easier to read, please.

This is too in depth.

Dear Sirs,

Frankly, I was a little disappointed as to the information you were seeking. Asking if something is important verses do you check for this would have been better to assess in this circumstance. All aspects of the medical exam are very important. Not all driver examinations are of equal quality and documentation. As an Examiner for many years, I have found many examples where the examiner either did not know the rules, guidance material or just didn't ask. I have no problem disqualifying a driver if they pose a safety hazard either for a medical problem or a medication that could pose a safety hazard. When I perform a driver physical, I tell the driver I do not represent their employer or them. I represent the DOT FMCSA. I have audited medical examiner forms from other examiners and have seen numerous omissions, passing when they had disqualifying conditions.

The questions about Health Education and Counseling should be addressed by a private personal physician. This does not mean that one should not advise proper rest, quality sleep, or diet and exercise. However, if the FMCSA requires this of all examiners, then the liability of predicting the future poor health or habits of a driver would prohibit any provider from performing any such requirement. A plaintiff attorney would not say that the obese, poor diet, no-exercising driver was at fault, that it had to be the examiners fault for passing his client if he/she were in an accident. The FMCSA should state that it is the driver's responsibility to follow a healthy lifestyle and the driver is ultimately responsible for their choices.

The Motor carrier should address the questions about physical abilities and job demands. By this, most employers will have a new hire demonstrate driving abilities, abilities to hitch and unhook a trailer safely. Most Medical examiners will not have a truck and trailer to simulate entry and exit.

Issues, such as reading, need to be a requirement for safety purposes. The driver should be the only one allowed to fill out the form.

Finally, the percentage questions on page nine omits the important point of knowing the Guidelines and recent interpretations on the FMCSA web page regarding medical issues.

Thanks for letting me vent. In Tennessee, our ACOEM chapter has two meetings a year where we include at least one hour of DOT/MRO updates. At least our TCOEM members try to do a better job following the regulations and trying to stay current.

Jay Hammett, Jr. MD

APPENDIX W

Free Responses from the Sample for the Short Follow-Up Survey

1. Which of the following is your profession?

Advanced Practice Nurse/Physician Assistant
BSN RN
Chiropractor
Office Administrator
Occupational Health Nurse
RNP

3. Which of the following best describes your primary job function?

½ clinical and ½ administration (6 Responses)
Clinical and Consultant
Clinical, Consultant, and Education
Community Work (Assessments)
Family Practice
Occupational Health
Primary Care

4. In what type of healthcare environment do you work?

CHC
College Health
Community
Community Based Clinic
Community Health Center (4 Responses)
Community Health Clinic
Community Health Clinic – School Based
Consultant and Clinic
Consultant General
Contract – Dept Education
Corporate Work Comp (Concentra)
Corrections
County Health Dept
Emergency Dept (3 Responses)
Family Health Center
Family Practice (2 Responses)
Federally Qualified Health Center (Rural Health)
FQHC
Free Standing OCC Med Clinic
Free Standing Walk-in-clinic
General Practice
Government
Group Practice and Industry/on-site
Group Practice OH Clinic
Group Practice and Urgent Care
HMO
Home Health
Hospital Affiliated Occupational Health Clinic
Hospital/Satellite Clinic Hosp Based
Hospital (Full Time) and Solo Practice (Weekend)
Hospital/Solo Practice/Urgent Care
Hospital/Urgent Care
HIS Clinic
Industrial Health – Part Time (Mobile Unit)
Industrial Medicine
Large Corporation
Mix Group Practice/OnSite
Occupational Health Associated with Hospital
Occupational Health Clinic Associated with Hospital
Occupational Health (8 Responses)
Occupational Health Center
Occupational Health Clinic (10 Responses)
Occupational Health Staff at our office
Occupational Medical Clinic (5 Responses)
Occupational Medical Clinic – Ambulatory
Occupational Medicine (6 Responses)
OCC Medical Clinic – Offsite Hospital Owned
Occupational Medicine
Outpatient
Primary Care
Primary Care Clinic (2 Responses)
Prison
Retired Military
Rural Clinic – Satelite to Lg Group
Rural Health Clinic (15 Responses)
Rural Health Primary Care
Rural Medical Center
Satellite Clinic
School Health Clinic and Mobile Medical Van
Solo Practice and Urgent Care
Teaching Clinic
Travel Medicine
University Health Center
Veterans Affair
Worker's Comp Clinic

Not employed presently

8. Take a course from any of the following organizations?

AANP

Ameri Lab
American Medical Testing
Armo
Artel Medical Centers
Central States Occupational Medicine Association
Certified DOT Trainer
Chiropractic Continue Ed.
DC Examiner/Taught as well
DOT
DOT (Hartenbaum – Columbus)
Dr. Mcbehee, Western States Chiro College
Dr. Sayton
Drug Free USA
Duke University
FMCSA
How to become Company Doctor TX Chiropractic Association
IACOHC
IAHOCH
Int. Acad. Of Chiropractic
International Academy of Chiropractic Occupational Health Consultants
Kaiser (2 Responses)
Midwest Safety Organization MPS, MN
Missouri
Mt. Sinai
National Academy of DOT Medical Examiners (2 Responses)
NE College Occupational Envir. Med.
Northwestern College
NWHSU (2 Responses)
OCC Diplomate Program ACA/NWHSU
Occupational Health Consultants
Private, Dr. Hartenbaun
Provided by Employer
Residency Training in OCC Med
SEAK Conference (Bipe Cod)
Shell Oil Corporation
Stanley Kaplan Work comp impairment
Workers Comp of Utah
WSCC
WSCC Seminar 9-06

9. To what materials do you typically refer when performing a physical exam for CMV drivers?

General References
ACOEM CMV news letter
Appleton & Lange: Occupational Medicine
Back of the form
CADMV Forms/Notices
California QME Exam Notes
CDC Dept of Health
CFR
Colleagues (2 Responses)
Colleagues in Occ. Health
Common Sense/My Experience
Dermatology Atlas. Anatomy bodies
DMV CDL Unit
DOT Conference papers ie. Cardiology and Neurology
DOT Form (6 Responses)
DOT instruction with exam form (2 Responses)
DOT Medical Exam Test Guidelines
DOT Offices
DOT Physical Form (2 Responses)
DOT regulations
DOT requirements
DOT St. of AK
Duke Web Site
E-Mail Dr. Wittels and Hatenbaum with questions
FAA
Federal Motor Carrier Safety Regulations
FMCSA Guidelines (2 Responses)
FMCSA Publications
FMCSA Web Site - (2 Responses)
General clinical knowledge with guidelines in DMV paperwork
General Training
Guidelines Attached to form
Handbook
IACCOH
Intermoon Halu Website
Internal Memos from Med Director
Iowa Motor Truck Association
JOEM
Journals
Keller Federal Motor Carrier Safety Regulations
Local Contact Person
Manual from CMV driver physical exam class
Medical Exam for Commercial Drivers
Med Direct – (2 Responses)
Medical Text Books
MN DOT Website
OEM Web
On The Job Training

Phone
Phone DOT
Physical Form provided
Preceptor
Published Guidelines
State Guides
State of CA DMV
Supervising Physician
TX DOT Web Site

ACOEM CDME Review
Board Certified MD
CDC Dept Health
Colleagues in Occupational Health
Company Regulations
Continuum Health Mgmt Systems
OCC Med Specialist
Sioux Valley OCC Health
State of Minnesota
Supervising Physicians/Peers

FMCSA References

GENERAL COMMENTS:
I did not respond to the original survey because it did not make sense. All the things in the survey were "very important" given the circumstances of each case, so the correct answer was "very important" for everything. There has got to be a better way to do a survey.

I started doing the exam, but I only got about ½ way before I got frustrated with the time consumed.

I am impressed with how hard you are working to get NRCME information and set up certified providers. It is long over due. Keep up the good work. Paula M Maionchi, Richmond KY.

Question 17 is really stupid!!!!

Question 17 Why?

Question 17 – This is a very poorly written question and table. Do you mean that I belong to? That I see in my practice? That I identify with politically? Whose Philosophy I support? You get the idea.

Question 17 – Do you mean my Ethnicity or that of the patients I see or the friends I have?

APPENDIX X

Task and Section Cognitive Ratings

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
I. Driver's Medical Information			
A. Identification and History		**2.90**	**30**
IA1 Verify the identity of the driver	2		
IA2 Ensure the driver signs the driver's statement about health history	1		
IA3a Identify, query, and note issues in a driver's medical record and / or health history as available, which may include specifics regarding any affirmative responses in the history	3		
IA3b Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any illness, surgery, or injury in the last five years	3		
IA3c Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any other hospitalizations or surgeries	3		
IA3d Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any recent changes in health status	3		
IA3e Identify, query, and note issues in a driver's medical record and / or health history as available, which may include whether he / she has any medical conditions or current complaints	3		
IA3f Identify, query, and note issues in a driver's medical record and / or health history as available, which may include any incidents of disability / physical limitations	3		
IA3g Identify, query, and note issues in a driver's medical record and / or health history as available, which may include limitations placed during prior FMCSA exams	3		
IA3h Identify, query, and note issues in a driver's medical record and / or health history as available, which may include current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying	3		
IA3i Identify, query, and note issues in a driver's medical record and / or health history as available, which may include his or her use of recreational / addictive substances (e.g., nicotine, alcohol, inhalants)	3		
IA3j Identify, query, and note issues in a driver's medical record and / or health history as available, which may include weight disorders (e.g., unexplained loss or gain, obesity)	3		
IA3k Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, macular degeneration, monocular vision)	3		
IA3l Identify, query, and note issues in a driver's medical record and / or health history as available, which may include disorders of the ears (e.g., hearing loss, hearing aids, vertigo, Meniere's, tinnitus, implants)	3		
IA3m Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiac symptoms (e.g., syncope, dyspnea, chest pain, palpitations)	3		
IA3n Identify, query, and note issues in a driver's medical record and / or health history as available, which may include cardiovascular diseases (e.g., hypertension, congestive heart failure, myocardial infarction, coronary insufficiency, or thrombosis)	3		

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
IA3o Identify, query, and note issues in a driver's medical record and / or health history as available, which may include hematologic disorders (e.g., bleeding disorders, anemia, cancer, organ transplant history)	3		
IA3p Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	3		
IA3q Identify, query, and note issues in a driver's medical record and / or health history as available, which may include pulmonary diseases (e.g., asthma, chronic lung disorders, tuberculosis, previous pulmonary embolus, pneumothorax)	3		
IA3r Identify, query, and note issues in a driver's medical record and / or health history as available, which may include sleep disorders (e.g., sleep apnea, narcolepsy, insomnia, daytime sleepiness, loud snoring, testing and / or treatments)	3		
IA3s Identify, query, and note issues in a driver's medical record and / or health history as available, which may include gastrointestinal disorders (e.g., pancreatitis, ulcers, ulcerative colitis, cirrhosis, hepatitis, irritable bowel syndrome, hernias)	3		
IA3t Identify, query, and note issues in a driver's medical record and / or health history as available, which may include genitourinary disorders (e.g., polycystic, nephrotic syndrome, kidney stones, renal failure, hernias)	3		
IA3u Identify, query, and note issues in a driver's medical record and / or health history as available, which may include diabetes mellitus	3		
IA3v Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other endocrine disorders (e.g., thyroid disorders, interventions / treatment)	3		
IA3w Identify, query, and note issues in a driver's medical record and / or health history as available, which may include musculoskeletal disorders (e.g., amputations, arthritis, spinal surgery)	3		
IA3x Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neoplastic disorders (e.g., leukemia; brain, bone, breast, and lung cancer)	3		
IA3y Identify, query, and note issues in a driver's medical record and / or health history as available, which may include substance use and abuse (e.g., alcohol, narcotics, illicit or legal drugs)	3		
IA3z Identify, query, and note issues in a driver's medical record and / or health history as available, which may include neurologic disorders (e.g., loss of consciousness, seizures, stroke / TIA, headaches / migraines, numbness / weakness)	3		
IA3aa Identify, query, and note issues in a driver's medical record and / or health history as available, which may include psychiatric disorders (e.g., schizophrenia, depression, anxiety, bipolar, ADHD, interventions / treatment)	3		
IA3bb Identify, query, and note issues in a driver's medical record and / or health history as available, which may include other conditions that could impair a driver's ability to safely function	3		
B. Physical Examination and Evaluation		**2.04**	**51**
IB1 Ensure the driver is properly clothed for the physical examination	1		
IB2 Record height and weight, and note whether a driver is overweight or underweight	2		

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
IB3a Examine the driver's eyes and note distant acuity in each and both eyes (Snellen comparable values)	2		
IB3b Examine the driver's eyes and note whether corrective lenses are required to meet the standard	3		
IB3c Examine the driver's eyes and note horizontal field of vision in each eye	2		
IB3d Examine the driver's eyes and note color recognition	2		
IB3e Examine the driver's eyes and note presence or absence of monocular vision	2		
IB3f Examine the driver's eyes and note reactivity to light and pupillary equality	2		
IB3g Examine the driver's eyes and note evidence of nystagmus and exophthalmos	2		
IB3h Examine the driver's eyes and note evaluation of extraoccular movements	2		
IB3i Examine the driver's eyes and note fundoscopic examination results	2		
IB4a Examine the driver's ears and note abnormalities of the ear canal and tympanic membrane	2		
IB4b Examine the driver's ears and note whisper test and / or audiometric results (in ANSI standard units) as indicated	3		
IB4c Examine the driver's ears and note presence or absence of a hearing aid and whether required to meet the standard	3		
IB5 Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing	2		
IB6a Examine the driver's neck and note range of motion	2		
IB6b Examine the driver's neck and note soft tissue palpation / examination (e.g., lymph nodes, thyroid gland)	2		
IB7a Examine the driver's heart: chest inspection (e.g., surgical scars, pacemaker / IAD)	2		
IB7b Examine the driver's heart: thrills, murmurs, extra sounds, and enlargement	2		
IB7c Examine the driver's heart: blood pressure and pulse (rate and rhythm)	2		
IB7d Examine the driver's heart: additional signs of disease (e.g., edema, bruits, diaphoresis, distended neck veins)	2		
IB8a Examine the driver's lungs, chest, and thorax, excluding breasts, and note respiratory rate and pattern	2		
IB8b Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal breath sounds	2		
IB8c Examine the driver's lungs, chest, and thorax, excluding breasts, and note abnormal chest wall configuration / palpation	2		
IB8d Examine the driver's lungs, chest, and thorax, excluding breasts, and note scars	2		
IB9a Examine the driver's abdomen, and note surgical scars	2		
IB9b Examine the driver's abdomen, and note an enlarged liver or spleen	2		
IB9c Examine the driver's abdomen, and note abnormal masses or bruits / pulsation	2		
IB9d Examine the driver's abdomen, and note abdominal tenderness	2		
IB9e Examine the driver's abdomen, and note hernias (e.g., inguinal, umbilical, ventral, femoral)	2		

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
IB10a Examine the driver's spine and note surgical scars and deformities	2		
IB10b Examine the driver's spine and note tenderness and muscle spasm	2		
IB10c Examine the driver's spine and note loss in range of motion and painful motion	2		
IB10d Examine the driver's spine and note kyphosis, scoliosis, or other spinal deformities	2		
IB11a Examine the driver's extremities and note gait, mobility, and posture while bearing his or her weight; limping or signs of pain	2		
IB11b Examine the driver's extremities and note loss, impairment, or use of orthosis	2		
IB11c Examine the driver's extremities and note deformities, atrophy, weakness, paralysis, surgical scars,	2		
IB11d Examine the driver's extremities and note elbow and shoulder strength, function, and mobility	2		
IB11e Examine the driver's extremities and note handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	2		
IB11f Examine the driver's extremities and note varicosities, skin abnormalities, and cyanosis, clubbing, or edema	2		
IB11g Examine the driver's extremities and note leg length discrepancy; lower extremity strength, motion, and function	2		
IB12a Examine the driver's neurologic status and note impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)	2		
IB12b Examine the driver's neurologic status and note gait disorders	2		
IB12c Examine the driver's neurologic status and note sensory or positional abnormalities	2		
IB12d Examine the driver's neurologic status and note tremor	2		
IB12e Examine the driver's neurologic status and note radicular signs	2		
IB12f Examine the driver's neurologic status and note reflexes (e.g., asymmetric deep-tendon, normal / abnormal patellar and Babinski	2		
IB13 Test the driver's urine and note specific gravity, protein, blood, and glucose	2		
IB14a Examine the driver's mental status and note comprehension and interaction	2		
IB14b Examine the driver's mental status and note cognitive impairment (e.g., orientation, intellect, memory, obsessions, circumstantial / tangential speech)	2		
IB14c Examine the driver's mental status and note signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	2		
C. Diagnostic Tests and/or Referrals		**2.27**	**11**
IC1a Obtain additional information when indicated by audiometrics	2		
IC1b Obtain additional information when indicated by cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	2		
IC1c Obtain additional information when indicated by blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	2		
IC1d Obtain additional information when indicated by chest radiograph	2		

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
IC1e Obtain additional information when indicated by respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	2		
IC1f Obtain additional information when indicated by sleep studies	2		
IC1g Obtain additional information when indicated by drug level monitoring (e.g., digoxin, theophylline)	2		
IC1h Obtain additional information when indicated by other tests	2		
IC2 Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider: vision, cardiac, pulmonary, endocrine, musculoskeletal, neurologic, sleep, mental/emotional health	3		
IC3a Refer a driver with limitations in extremity movement for an on-road performance evaluation and / or skill performance evaluation	3		
IC3b Refer a driver for conditions not directly related to certification, but detected during the examination	3		
D. Documentation of Ancillary Information		**1.19**	**16**
ID1a Record / include results as available with other information about the driver, which may include audiometrics	1		
ID1b Record / include results as available with other information about the driver, which may include cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	1		
ID1c Record / include results as available with other information about the driver, which may include blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	1		
ID1d Record / include results as available with other information about the driver, which may include chest radiograph	1		
ID1e Record / include results as available with other information about the driver, which may include respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	1		
ID1f Record / include results as available with other information about the driver, which may include sleep studies	1		
ID1g Record / include results as available with other information about the driver, which may include drug level monitoring (e.g., digoxin, theophylline)	1		
ID1h Record / include results as available with other information about the driver, which may include other tests	1		
ID1i Record / include results as available with other information about the driver, which may include treating physician's work release	1		
ID2 Integrate a specialist's evaluation with other information about the driver	2		
ID3 Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption	1		
ID4 Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's / optometrist's report as required	1		
ID5a Include if available a current skill performance evaluation certificate	1		
ID5b Include if available documentation of intracity zone exemption	1		
ID6a Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with alcoholism who completed counseling and treatment to the point of full recovery	2		

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
ID6b Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with prohibited drug use who shows evidence he or she is now free from such use	2		
II. Determination of Driver's Qualifications and Disposition			
A. Health Education Counseling		**2.00**	**12**
IIA1 Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider	3		
IIA2a a. Advise a driver regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g., antihistamines, cold and cough medications) that could negatively affect his or her driving	3		
IIA2b Advise a driver that fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving	3		
IIA2c Advise a driver with contact lenses he or she should carry a pair of glasses while driving	1		
IIA2d Advise a driver with a hearing aid he / she should possess a spare power source for the device while driving	1		
IIA2e Advise a driver who has had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event	3		
IIA2f Advise a driver who has diabetes about glucose monitoring frequencies and the minimum threshold while driving	3		
IIA2g1) Advise a driver with a diabetes exemption, he / she should possess a rapidly absorbable form of glucose while driving	1		
IIA2g2) Advise a driver with a diabetes exemption, he / she should self-monitor blood glucose one hour before driving and at least once every four hours while driving	1		
IIA2g3) Advise a driver with a diabetes exemption, he / she should comply with each condition of his / her exemption	1		
IIA2g4) Advise a driver with a diabetes exemption, he / she should plan to submit glucose monitoring logs for each annual recertification	1		
IIA3 Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include…	3		
B. Risk Assessment		**2.67**	**12**
IIB1 Consider a driver's ability to…	3		
IIB2a Review Skill Performance Evaluation (SPE) cases: identify terms, conditions, and limitations set forth in a driver's SPE Certificate	1		
IIB2b Review Skill Performance Evaluation (SPE) cases: ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	1		
IIB3 Consider a driver's cognitive ability to…	3		
IIB4a Consider general health and wellness factors such as adverse health effects associated with rotating work schedules and irregular sleep patterns	3		
IIB4b Consider general health and wellness factors such as long-term effects of fatigue associated with extended work hours without breaks	3		
IIB4c Consider general health and wellness factors such as risk factors associated with common dietary choices available to drivers	3		

Content Domains and Tasks	Task Cog Rating	Mean Cog for Section	Section Task Count
IIB4d Consider general health and wellness factors such as stressors likely associated with extended time away from a driver's social support system	3		
IIB4e Consider general health and wellness factors such as short- and long-term health effects of stress from…	3		
IIB5 Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment	3		
IIB6 Consider for documented conditions the rate of progression, degree of control, and likelihood of sudden incapacitation (e.g., cardiovascular, neurologic, respiratory, musculoskeletal)	3		
IIB7 Support the rationale for using FMCSA guidelines that have not been published in regulations yet	3		
C. Certification Outcomes and Intervals		**2.07**	**14**
IIC1a Apply nondiscretionary certification standards to disqualify a driver with a history of epilepsy	2		
IIC1b Apply nondiscretionary certification standards to disqualify a driver with diabetes requiring insulin control (unless accompanied by an exemption)	2		
IIC1c Apply nondiscretionary certification standards to disqualify a driver when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption	2		
IIC1d Apply nondiscretionary certification standards to disqualify a driver when hearing measurements with or without a hearing aid fall below minimum standards	2		
IIC2a Disqualify a driver who is currently taking methadone	2		
IIC2b Disqualify a driver who has a current clinical diagnosis of alcoholism	2		
IIC2c Disqualify a driver who uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician	2		
IIC3 Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists	3		
IIC4 Document the reason(s) for the disqualification and / or referral	2		
IIC5 Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified	3		
IIC6 Certify a driver for an appropriate interval	3		
IIC7 Indicate certification status, which may require…	1		
IIC8 Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition	2		
IIC9 Complete a medical examination report and medical certificate / card…	1		
		Total	**146**

APPENDIX Y

Detailed Content Outline

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

National Registry of Certified Medical Examiners (NRCME)
FMCSA Medical Examiner
Detailed Content Outline

Open cells show an examination could include items from indicated cognitive levels.
Shaded cells prevent appearance of items on examinations.

	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
I. DRIVER'S MEDICAL INFORMATION	**23**	**33**	**14**	**70**
A. Identification and History	**4**	**6**	**10**	**20**
1. Verify the identity of the driver				
2. Ensure the driver signs the driver's statement about health history				
3. Identify, query, and note issues in a driver's medical record and / or health history as available, which may include				
a. specifics regarding any affirmative responses in the history				
b. any illness, surgery, or injury in the last five years				
c. any other hospitalizations or surgeries				
d. any recent changes in health status				
e. whether he / she has any medical conditions or current complaints				
f. any incidents of disability / physical limitations				
g. limitations placed during prior FMCSA exams				
h. current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying				
i. his or her use of recreational / addictive substances e.g., ▪ nicotine ▪ inhalants ▪ alcohol				
j. weight disorders e.g., ▪ unexplained loss ▪ obesity ▪ unexplained gain				
k. disorders of the eyes e.g., ▪ retinopathy ▪ glaucoma ▪ cataracts ▪ macular degeneration ▪ aphakia ▪ monocular vision				
l. disorders of the ears e.g., ▪ hearing loss ▪ Meniere's ▪ hearing aids ▪ Tinnitus ▪ vertigo ▪ implants				
m. cardiac symptoms e.g., ▪ syncope ▪ chest pain ▪ dyspnea ▪ palpitations				
n. cardiovascular diseases e.g., ▪ hypertension ▪ coronary insufficiency ▪ congestive heart failure ▪ thrombosis ▪ myocardial infarction				
o. hematologic disorders e.g., ▪ bleeding disorders ▪ cancer ▪ anemia ▪ organ transplant history				

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

National Registry of Certified Medical Examiners (NRCME)
FMCSA Medical Examiner
Detailed Content Outline

Open cells show an examination could include items from indicated cognitive levels.
Shaded cells prevent appearance of items on examinations.

	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
p. pulmonary symptoms e.g., ▪ dyspnea ▪ orthopnea ▪ chronic cough				
q. pulmonary diseases e.g., ▪ asthma ▪ chronic lung disorders ▪ tuberculosis ▪ previous pulmonary embolus ▪ pneumothorax				
r. sleep disorders e.g., ▪ sleep apnea ▪ narcolepsy ▪ insomnia ▪ daytime sleepiness ▪ loud snoring ▪ testing and / or treatments				
s. gastrointestinal disorders e.g., ▪ pancreatitis ▪ ulcers ▪ ulcerative colitis ▪ cirrhosis ▪ hepatitis ▪ irritable bowel syndrome ▪ hernias				
t. genitourinary disorders e.g., ▪ polycystic ▪ nephrotic syndrome ▪ kidney stones ▪ renal failure ▪ hernias				
u. diabetes mellitus ▪ weight loss ▪ duration on current medications ▪ medication side effects ▪ complications from diabetes ▪ availability of emergency glucose supply ▪ presence and frequency of hypoglycemic / hyperglycemic episodes / reactions				
v. other endocrine disorders (e.g., thyroid disorders, interventions / treatment)				
w. musculoskeletal disorders e.g., ▪ amputations ▪ arthritis ▪ spinal surgery				
x. neoplastic disorders e.g., leukemia; ▪ brain cancer ▪ bone cancer ▪ breast cancer ▪ lung cancer				
y. substance use and abuse e.g., ▪ alcohol ▪ narcotics ▪ illicit or legal drugs				

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FMCSA Medical Examiner
Detailed Content Outline

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Shaded cells prevent appearance of items on examinations.

	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
z. neurologic disorders e.g., ▪ loss of consciousness ▪ headaches / migraines ▪ seizures ▪ numbness / weakness ▪ stroke / TIA				
aa. psychiatric disorders e.g., ▪ schizophrenia ▪ bipolar ▪ depression ▪ ADHD ▪ anxiety ▪ interventions / treatment				
bb. other conditions that could impair a driver's ability to safely function				
B. Physical Examination and Evaluation	**8**	**15**	**2**	**25**
1. Ensure the driver is properly clothed for the physical examination				
2. Record height and weight, and note whether a driver is overweight or underweight				
3. Examine the driver's eyes and note				
a. distant acuity in each and both eyes (Snellen comparable values)				
b. whether corrective lenses are required to meet the standard				
c. horizontal field of vision in each eye				
d. color recognition				
e. presence or absence of monocular vision				
f. reactivity to light and pupillary equality				
g. evidence of nystagmus and exophthalmos				
h. evaluation of extraoccular movements				
i. fundoscopic examination results				
4. Examine the driver's ears and note				
a. abnormalities of the ear canal and tympanic membrane				
b. whisper test and / or audiometric results (in ANSI standard units) as indicated				
c. presence or absence of a hearing aid and whether required to meet the standard				
5. Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing				
6. Examine the driver's neck and note				
a. range of motion				
b. soft tissue palpation / examination (e.g., lymph nodes, thyroid gland)				
7. Examine the driver's heart				
a. chest inspection (e.g., surgical scars, pacemaker / IAD)				
b. thrills, murmurs, extra sounds, and enlargement				
c. blood pressure and pulse (rate and rhythm)				
d. additional signs of disease e.g., ▪ edema ▪ diaphoresis ▪ bruits ▪ distended neck veins				

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	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
8. Examine the driver's lungs, chest, and thorax, excluding breasts, and note				
a. respiratory rate and pattern				
b. abnormal breath sounds				
c. abnormal chest wall configuration / palpation				
d. scars				
9. Examine the driver's abdomen and note				
a. surgical scars				
b. an enlarged liver or spleen				
c. abnormal masses or bruits / pulsation				
d. abdominal tenderness				
e. hernias e.g., ▪ inguinal ▪ ventral ▪ umbilical ▪ femoral				
10. Examine the driver's spine and note				
a. surgical scars and deformities				
b. tenderness and muscle spasm				
c. loss in range of motion and painful motion				
d. kyphosis, scoliosis, or other spinal deformities				
11. Examine the driver's extremities and note				
a. gait, mobility, and posture while bearing his or her weight; limping or signs of pain				
b. loss, impairment, or use of orthosis				
c. deformities, atrophy, weakness, paralysis, surgical scars				
d. elbow and shoulder strength, function, and mobility				
e. handgrip and prehension relative to requirements for controlling a steering wheel and gear shift				
f. varicosities, skin abnormalities, and cyanosis, clubbing, or edema				
g. leg length discrepancy; lower extremity strength, motion, and function				
12. Examine the driver's neurologic status and note				
a. impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)				
b. gait disorders				
c. sensory or positional abnormalities				
d. tremor				
e. radicular signs				
f. reflexes e.g., ▪ asymmetric deep-tendon ▪ Babinski ▪ normal / abnormal patellar				
13. Test the driver's urine and note specific gravity, protein, blood, and glucose				

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	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
14. Examine the driver's mental status and note				
a. comprehension and interaction				
b. cognitive impairment e.g., ▪ orientation ▪ intellect ▪ memory ▪ obsessions ▪ circumstantial / tangential speech				
c. signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional				
C. Diagnostic Tests and / or Referrals	**6**	**10**	**2**	**18**
1. Obtain additional information when indicated by				
a. audiometrics				
b. cardiovascular studies e.g., ▪ electrocardiogram ▪ stress test ▪ ejection fraction ▪ vascular studies				
c. blood analyses e.g., ▪ creatinine ▪ electrolytes ▪ toxicology ▪ lipids ▪ blood chemistries				
d. chest radiograph				
e. respiratory tests e.g., ▪ spirometry ▪ diffusion ▪ lung volumes ▪ oximetry or arterial blood gas analysis with or without exercise				
f. sleep studies				
g. drug level monitoring (e.g., digoxin, theophylline)				
h. other tests				
2. Refer a driver who exhibits evidence of any of the following disorders for follow-up care and evaluation by an appropriate specialist or primary care provider ▪ vision (e.g., retinopathy, macular degeneration) ▪ cardiac (e.g., myocardial infarction, coronary insufficiency, blood pressure control) ▪ pulmonary (e.g., emphysema, fibrosis) ▪ endocrine (e.g., diabetes) ▪ musculoskeletal (e.g., arthritis, neuromuscular disease) ▪ neurologic (e.g., seizures) ▪ sleep (e.g., obstructive sleep apnea) ▪ mental / emotional health (e.g., depression, schizophrenia)				

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	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
3. Refer a driver				
a. with limitations in extremity movement for an on-road performance evaluation and / or skill performance evaluation				
b. for conditions not directly related to certification, but detected during the examination				
D. Documentation of Ancillary Information	**5**	**2**	**0**	**7**
1. Record / include results as available with other information about the driver, which may include				
a. audiometrics				
b. cardiovascular studies e.g., ▪ electrocardiogram ▪ stress test ▪ ejection fraction ▪ vascular studies				
c. blood analyses e.g., ▪ creatinine ▪ electrolytes ▪ toxicology ▪ lipids ▪ blood chemistries				
d. chest radiograph				
e. respiratory tests e.g., ▪ spirometry ▪ diffusion ▪ lung volumes ▪ oximetry or arterial blood gas analysis with or without exercise				
f. sleep studies				
g. drug level monitoring (e.g., digoxin, theophylline)				
h. other tests				
i. treating physician's work release				
2. Integrate a specialist's evaluation with other information about the driver				
3. Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption				
4. Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's / optometrist's report as required				
5. Include if available				
a. a current skill performance evaluation certificate				
b. documentation of intracity zone exemption				
6. Review results of SAP evaluations for alcohol and drug use and / or abuse for a driver with				
a. alcoholism who completed counseling and treatment to the point of full recovery				
b. prohibited drug use who shows evidence he or she is now free from such use				

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	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
II. DETERMINATION OF DRIVER'S QUALIFICATIONS AND DISPOSITION	**7**	**12**	**11**	**30**
A. Health Education Counseling	**2**	**1**	**1**	**4**
1. Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider				
2. Advise a driver				
a. regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g., antihistamines, cold and cough medications) that could negatively affect his or her driving				
b. that fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving				
c. with contact lenses he or she should carry a pair of glasses while driving				
d. with a hearing aid he / she should possess a spare power source for the device while driving				
e. who has had a deep vein thrombosis event of risks associated with inactivity while driving and interventions that could prevent another thrombotic event				
f. who has diabetes about glucose monitoring frequencies and the minimum threshold while driving				
g. with a diabetes exemption, he / she should				
1) possess a rapidly absorbable form of glucose while driving				
2) self-monitor blood glucose one hour before driving and at least once every four hours while driving				
3) comply with each condition of his / her exemption				
4) plan to submit glucose monitoring logs for each annual recertification				
3. Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include ▪ the immediate post-operative period ▪ a vision disability (e.g., retinopathy, macular degeneration) ▪ a cardiac event (e.g., myocardial infarction, coronary insufficiency) ▪ a chronic pulmonary exacerbation (e.g., emphysema, fibrosis) ▪ uncontrolled hypertension ▪ endocrine dysfunctions (e.g., diabetes) ▪ musculoskeletal challenges (e.g., arthritis, neuromuscular disease) ▪ a neurologic event (e.g., seizures, stroke, TIA) ▪ a sleep disorder (e.g., obstructive sleep apnea) ▪ mental health dysfunctions (e.g., depression, bipolar)				

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	Items			
	Cognitive Level			
	Recall	Application	Analysis	Totals
B. Risk Assessment	**2**	**4**	**8**	**14**
1. Consider a driver's ability to ▪ couple and uncouple trailers from a tractor ▪ load or unload several thousand pounds of freight ▪ install and remove tire chains ▪ manipulate and secure tarpaulins that cover open trailer ▪ move one's own body through space while climbing ladders; bending, stooping, and crouching; entering and exiting the cab ▪ manipulate an oversized steering wheel ▪ shift through several gears using a manual transmission ▪ perform precision prehension and power grasping ▪ use arms, feet, and legs during CMV operation				
2. Review Skill Performance Evaluation (SPE) cases				
a. identify terms, conditions, and limitations set forth in a driver's SPE Certificate				
b. ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm				
3. Consider a driver's cognitive ability to ▪ plan a travel route ▪ inspect the operating condition of a tractor and / or trailer ▪ monitor and adjust to a complex driving situation ▪ maneuver through crowded areas ▪ quickly alter the course of vehicle to avoid trouble				
4. Consider general health and wellness factors such as				
a. adverse health effects associated with rotating work schedules and irregular sleep patterns				
b. long-term effects of fatigue associated with extended work hours without breaks				
c. risk factors associated with common dietary choices available to drivers				
d. stressors likely associated with extended time away from a driver's social support system				
e. short- and long-term health effects of stress from ▪ tight pickup and delivery schedules ▪ irregular work, rest, and eating patterns / dietary choices ▪ adverse road, weather, and traffic conditions ▪ exposure to temperature extremes, vibration, and noise ▪ transporting passengers or hazardous products				

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	Cognitive Level			
	Recall	Application	Analysis	Totals
5. Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment				
6. Consider for documented conditions the rate of progression, degree of control, and likelihood of sudden incapacitation e.g.,				
▪ cardiovascular ▪ respiratory ▪ neurologic ▪ musculoskeletal				
7. Support the rationale for using FMCSA guidelines that have not been published in regulations yet				
C. Certification Outcomes and Intervals	**3**	**7**	**2**	**12**
1. Apply nondiscretionary certification standards to disqualify a driver				
a. with a history of epilepsy				
b. with diabetes requiring insulin control (unless accompanied by an exemption)				
c. when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption				
d. when hearing measurements with or without a hearing aid fall below minimum standards				
2. Disqualify a driver who				
a. is currently taking methadone				
b. has a current clinical diagnosis of alcoholism				
c. uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician				
3. Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists				
4. Document the reason(s) for the disqualification and / or referral				
5. Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified				
6. Certify a driver for an appropriate interval				
7. Indicate certification status, which may require ▪ waiver / exemption, which the medical examiner identifies ▪ wearing corrective lenses ▪ wearing a hearing aid ▪ a Skill Performance Evaluation Certificate				
8. Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition				

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	Items			
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	Recall	Application	Analysis	Totals
9. Complete a medical examination report and medical certificate / card ▪ ensure use of currently required examination form ▪ ensure the form includes the examiner's name, examination date, office address, and telephone number ▪ ensure the driver signs the medical certificate / card				
Totals	**30**	**45**	**25**	**100**

APPENDIX Z

Knowledge, Skills, and Abilities Statements (KSAs)

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
I. DRIVER'S MEDICAL INFORMATION				
A. Physical Examination and Evaluation				
1. Verify the identity of the driver	**1**	CMV driver identification in 49 CFR Part 40, §40.61		compare a driver's facial features to his or her government or employer-issued photo-identification
2. Ensure the driver signs the driver's statement about health history	**2**	requirements that each driver sign and date the health history report affirmation statements: "I certify that the above information is complete and true. I understand that inaccurate, false or missing information may invalidate the examination and my Medical Examiner's Certificate" in 49 CFR 391.43		
3. Identify, query, and note issues in a driver's medical record and/or health history as available, which may include				
a. specifics regarding any affirmative responses in the history	**3**	requirements for documentation of onset date, diagnosis, treating physician's name and address, and any current limitations for each affirmative health history response in 49 CFR 391.43		elicit and interpret additional information from a driver regarding his or her medical history
b. any illness, surgery, or injury in the last five years	**4**	requirements that a history of conditions may be a cause for disqualification, may indicate the need for additional laboratory tests or more stringent examination perhaps by a medical specialist, as discussed in 49 CFR 391.43		elicit and interpret additional information from a driver regarding his or her medical history
c. any other hospitalizations or surgeries	**5**	requirements that a history of conditions may be a cause for disqualification, may indicate the need for additional laboratory tests or more stringent examination (perhaps by a medical specialist even longer than five years after the illness, surgery or injury), as discussed in 49 CFR 391.43		elicit and interpret additional information from a driver regarding his or her medical history

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
d. any recent changes in health status	**6**	driver medical standards that may no longer be met if the driver's health status has changed, as indicated in 49 CFR 391.41		elicit and interpret additional information from a driver regarding his or her medical history
e. whether he/she has any medical conditions or current complaints	**7**	49 CFR 391.41 and 49 CFR 391.43, which allow the medical examiner to disqualify a driver temporarily until an acute condition resolves		elicit and interpret additional information from a driver regarding his or her medical history
f. any incidents of disability / physical limitations	**8**	alternative physical qualification standards (contained in 49 CFR 391.64) for the loss or impairment of limbs that may apply when the driver cannot qualify under the standards indicated in 49 CFR 391.41		elicit and interpret additional information from a driver regarding his or her medical history
g. limitations placed during prior FMCSA exams	**9**	49 CFR 391.41–49, which do not allow medical examiners to place on the driver restrictions other than those listed on the medical certificate; only FMCSA can grant exemptions and/or waivers		elicit and interpret additional information from a driver regarding his or her medical history
h. current OTC and prescription medications and supplements, and potential side effects, which may be potentially disqualifying	**10**	examiner requirements to (1) list medications (including over-the-counter medications) used regularly or recently, (2) discuss side effects and potential hazards while driving on medications, and (3) educate on how to read medication warning labels in 49 CFR 43		elicit and interpret additional information from a driver regarding his or her medical history
		modes of action and common side effects of medications typically taken by CMV drivers		
i. his or her use of recreational / addictive substances (e.g., nicotine, alcohol, inhalants)	**11**	FMCSA medical report recommending screening instruments such as the Michigan Alcoholism Screening Test (MAST)		elicit and interpret additional information from a driver regarding his or her medical history
j. weight disorders (e.g., unexplained loss or gain, obesity)	**12**	conditions discussed in FMCSA medical reports regarding conditions associated with unexplained weight gain and/or loss		elicit and interpret additional information from a driver regarding his or her medical history

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
k. disorders of the eyes (e.g., retinopathy, cataracts, aphakia, glaucoma, macular degeneration, monocular vision)	**13**	49 CFR 391.43, which • lists five eye disorders that require medical examiners to ask about eye disorders and refer to a specialist if appropriate • states a standard for individuals with monocular vision		elicit and interpret additional information from a driver regarding his or her medical history
		requirements for maintaining CMV certification for monocular drivers in 49 CFR 391.64		
l. disorders of the ears (e.g., hearing loss, hearing aids, vertigo, Meniere's, tinnitus, implants)	**14**	49 CFR 391.41, which lists hearing loss as one of the non-discretionary disqualification conditions		elicit and interpret additional information from a driver regarding his or her medical history
		the current Federal Motor Carrier Safety Regulation (FMCSR) including identification that there is no existing hearing waiver or exemption program		
m. cardiac symptoms (e.g., syncope, dyspnea, chest pain, palpitations)	**15**	the list of disqualifying CVD symptoms 1) syncope, (2) dyspnea, (3) collapse, or (4) congestive, cardiac failure in 49 CFR 391.41(b)		elicit and interpret additional information from a driver regarding his or her medical history
		the 2002 Cardiovascular Advisory Panel Guidelines recommended queries of CVD symptoms in addition to the diseases listed on the medical report form		
		the 2002 Cardiovascular Advisory Panel Guidelines recommendation that medical examiners • distinguish between pre-syncope (dizziness, lightheadedness) and true syncope (loss of consciousness) • distinguish between chest pain, pressure, ache, or dyspnea at rest or with exertion • identify whether palpitations are recurrent and/or severe • assess for symptoms of claudication, such as buttock, leg, or calf pain with ambulation that resolves with rest		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
n. cardiovascular diseases (e.g., hypertension, congestive heart failure, myocardial infarction, coronary insufficiency, or thrombosis)	**16**	the 2002 Cardiovascular Advisory Panel Guidelines • list of modifiable and non-modifiable factors for CVD • rationale supporting the taking of detailed CVD history for CMV driver certification		elicit and interpret additional information from a driver regarding his or her medical history
		49 CFR 391.43, Instructions to the Medical Examiner, Cardiovascular Condition 391.41(b)(4) definition for "current clinical diagnosis of" of CVD		
o. hematologic disorders (e.g., bleeding disorders, anemia, cancer, organ transplant history)	**17**	the current FMCSR, which includes identifying • that hematological diseases and disorders are queried at the medical examiners' discretion • there is no mandatory hematological testing except for blood in the urinalysis		elicit and interpret additional information from a driver regarding his or her medical history
p. pulmonary symptoms (e.g., dyspnea, orthopnea, chronic cough)	**18**	49 CFR 391.43, which states abnormal findings on physical exam may require further testing such as pulmonary tests		elicit and interpret additional information from a driver regarding his or her medical history
		the six pulmonary screening questions recommended by the 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* panel for CMV drivers		
		acute pulmonary symptoms that can temporarily disqualify a CMV driver		
q. pulmonary diseases (e.g., asthma, chronic lung disorders, tuberculosis, previous pulmonary embolus, pneumothorax)	**19**	the four pulmonary disorder/disease groups described by the 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* panel for CMV drivers		elicit and interpret additional information from a driver regarding his or her medical history
r. sleep disorders (e.g., sleep apnea, narcolepsy, insomnia, daytime sleepiness, loud snoring, testing and/ or treatments)	**20**	the four sleep disorder symptoms listed in the health history section of 49 CFR 391.43 Medical Examination Report		elicit and interpret additional information from a driver regarding his or her medical history
		the FMCSA Medical Program FAQ response to "Can CMV drivers be qualified while being prescribed Provigil (Modafinil)?"		
s. gastrointestinal disorders	**21**	conditions listed in section (f) (abdomen and viscera) of 49 CFR 391.43		elicit and interpret additional information

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
(e.g., pancreatitis, ulcers, ulcerative colitis, cirrhosis, hepatitis, irritable bowel syndrome, hernias)		the "extent to which" a hernia should be "evaluated" according to section (f) (genital-urinary and rectal examination) of 49 CFR 391.43		from a driver regarding his or her medical history
t. genitourinary disorders (e.g., polycystic, nephrotic syndrome, kidney stones, renal failure, hernias)	**22**	conditions listed in section (f) (genital-urinary and rectal examination) in 49 CFR 391.43		elicit and interpret additional information from a driver regarding his or her medical history
		the FMCSA Medical Program FAQ response to "Is a driver on kidney dialysis disqualified?"		
u. diabetes mellitus ▪ weight loss ▪ duration on current medications ▪ medication side effects ▪ complications from diabetes ▪ availability of emergency glucose supply ▪ presence and frequency of hypoglycemic / hyperglycemic episodes / reactions	**23**	distinctions between insulin-controlled diabetes and non insulin-controlled diabetes in • 49 CFR 391.41 • 49 CFR 391.43		elicit and interpret additional information from a driver regarding his or her medical history
		diabetes provisions in grandfathering for certain drivers participating in vision and diabetes waiver study programs, as discussed in 49 CFR 391.64		
		diabetes provisions listed in the applicant checklist for certain drivers granted a diabetes waiver by FMCSA		
		medical history recommendations given by the1988 *Conference on Diabetic Disorders and Commercial Drivers* panel		
v. other endocrine disorders (e.g., thyroid disorders, interventions / treatment)	**24**	general appearance and development list of symptoms and the list of possible causes contained in 49 CFR 391.43(f)		elicit and interpret additional information from a driver regarding his or her medical history
w. musculoskeletal disorders (e.g., amputations, arthritis, spinal surgery)	**25**	musculoskeletal standards in 49 CFR 391.41(b)(1),(b)(2), and (b)(7)		elicit and interpret additional information from a driver regarding his or her medical history
		alternative physical qualification standards for loss or impairment of limbs described in 49 CFR 391.49		
		recommendations for the neuromuscular diseases and disorders discussed in the 1988 *Conference on Neurological Disorders and Commercial Driver* reports		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
x. neoplastic disorders (e.g., leukemia; brain, bone, breast, and lung cancer)	**26**	proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		elicit and interpret additional information from a driver regarding his or her medical history
y. substance use and abuse (e.g., alcohol, narcotics, illicit or legal drugs)	**27**	standard for drug use for CMV drivers in 49 CFR 391.41(b)(12)		elicit and interpret additional information from a driver regarding his or her medical history
		the controlled substance identified in 21 CFR 1308.11 [49 CFR 391.41(b)(12)]		
		exceptions for drug use in 49 CFR 391.41(b)(12)		
		49 CFR 391.41(b)(13) • the standard for alcohol abuse • advisory criteria definition for "clinical diagnosis"		
		the FMCSA Medical Program FAQ response to "How do Medical Examiners differ from Medical Review Officers?"		
z. neurologic disorders (e.g., loss of consciousness, seizures, stroke/TIA, headaches/ migraines, numbness/ weakness)	**28**	neurological disorders standards in 49 CFR 391.41 (b)(7), (b)(8), and (b)(9)		elicit and interpret additional information from a driver regarding his or her medical history
		neurological disorders, definitions, and diseases discussed in the 1988 *Conference on Neurological Disorders and Commercial Driver* reports		
		the FMCSA Medical Program FAQ response to "Can I get a waiver if I have had a single unprovoked seizure?"		
aa. psychiatric disorders (e.g., schizophrenia, depression, anxiety, bipolar, ADHD, interventions / treatment)	**29**	standard for psychiatric disease and disorders and advisory criteria in 49 CFR 391.41(b)(9)		elicit and interpret additional information from a driver regarding his or her medical history
		the 12 psychiatric screening questions recommended by the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* panel		
		the 11 nonverbal psychiatric screening cues in the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* to watch for when examining CMV drivers		
bb. other conditions that could impair a driver's ability to safely function	**30**	proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		elicit and interpret additional information from a driver regarding his or her medical history

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
B. Physical Examination and Evaluation				
1. Ensure the driver is properly clothed for the physical examination	**31**	the protocol for medical examiners addressed in 49 CFR 391.43(c)(2)		respect a driver's privacy and confidentiality
2. Record height and weight, and note whether a driver is overweight or underweight	**32**	weight and height requirements for the Medical Examination Report, as discussed in 49 CFR 391.43 general appearance and development instructions for "overweight" findings, as indicated in 49 CFR 391.43(f)	proficiently using medical protocols and techniques	recognize abnormalities
3. Examine the driver's eyes and note				
a. distant acuity in each and both eyes (Snellen comparable values)	**33**	standards for distant visual acuity in 49 CFR 391.41(b)(10) reporting requirements for distant acuity for Medical Examination Report vision standards in 49 CFR 391.43 converting non-Snellen test results to Snellen equivalents	proficiently using medical protocols and techniques	recognize abnormalities
b. whether corrective lenses are required to meet the standard	**34**	advisory criteria for corrective lenses to meet vision standards in 49 CFR 391.41(b)(10)		compare vision testing results to the FMCSA qualification standards
c. horizontal field of vision in each eye	**35**	standards for horizontal field of vision in 49 CFR 391.41(b)(10) the *Visual Disorders and Commercial Drivers* panel recommendation for FMCSA to revise the field of vision requirement	proficiently using medical protocols and techniques	recognize abnormalities
d. color recognition	**36**	49 CFR 391.41(b)(10) • vision standards for color recognition • threshold for administering a controlled test for signal red, green, and amber recognition	proficiently using medical protocols and techniques	recognize abnormalities
e. presence or absence of monocular vision	**37**	minimum requirements for an eye examination and reporting, as outlined in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
f. reactivity to light and pupillary equality	**38**	minimum requirements for an eye examination and reporting, as outlined in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
g. evidence of nystagmus and exophthalmos	**39**	minimum requirements for an eye examination and reporting, as outlined in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
h. evaluation of extraoccular movements	**40**	minimum requirements for an eye examination and reporting, as outlined in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
i. fundoscopic examination results	**41**	minimum requirements for an eye examination and reporting, as outlined in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities confirm certain conditions and stages of abnormalities
4. Examine the driver's ears and note				
a. abnormalities of the ear canal and tympanic membrane	**42**	minimum requirements for an ear examination and reporting, listed in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
b. whisper test and/or audiometric results (in ANSI standard units) as indicated	**43**	minimum requirements to test hearing and report results, as outlined in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities determine the need for an audiometric test as required by FMCSA
		conversion from non-ANSI standard audiometric results to ANSI standard equivalents		
		the whisper test threshold(s) that require follow-up audiometric hearing tests	converting audiometric test results to an ANSI standard	
c. presence or absence of a hearing aid and whether required to meet the standard	**44**	advisory criteria for testing drivers with hearing aids, as addressed in 49 CFR 391.41(b)(11)	proficiently using medical protocols and techniques	recognize abnormalities determine the need for further audiometric testing by an audiologist
5. Examine the driver's mouth and throat, and note conditions that may interfere with breathing, speaking, or swallowing	**45**	Medical examination report; *Section 7, Physical Exam, Body System 4. Mouth and Throat* in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
6. Examine the driver's neck and note				
a. range of motion	**46**	advisory criteria for examining the cervical spine of a driver, as discussed in 49 CFR 391.41(b)(7)		assess the range of motion required for safe CMV operation and recognize abnormalities
b. soft tissue palpation/ examination (e.g., lymph nodes, thyroid gland)	**47**	proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)	proficiently using medical protocols and techniques	recognize abnormalities
7. Examine the driver's heart				
a. chest inspection (e.g., surgical scars, pacemaker/IAD)	**48**	the five conditions listed in the *Physical Examination, Body System 5. Heart* in the 49 CFR 391.43 Medical Examination Report example form		identify evidence of cardiac and thoracic procedures
		the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report • the pacemaker discussion and recommendations • the implantable defibrillator discussion and recommendations • the angioplasty/stents discussion and recommendations • the coronary artery bypass graft (CABG) discussion and recommendations		
		FMCSA Medical Program FAQ responses to • "Can I drive a commercial vehicle after having angioplasty/stents inserted into my heart?" • "If a driver had a Myocardial Infarction (MI), followed by coronary artery bypass graft (CABG) several months ago, should he have an exercise tolerance test as recommended in the MI guidelines, but not in the CABG guidelines?" • "How soon may a driver be certified after CABG surgery?"		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
b. thrills, murmurs, extra sounds, and enlargement	**49**	the five conditions listed in the *Physical Examination, Body System 5. Heart* in the 49 CFR 391.43 Medical Examination Report example form	proficiently using medical protocols and techniques	recognize abnormalities determine the location, character, and type of abnormalities
		the heart murmur discussion and recommendations in the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		
c. blood pressure and pulse (rate and rhythm)	**50**	the blood pressure and pulse protocol and recording requirements in the Medical Examination Report in 49 CFR §391.43	proficiently using medical protocols and techniques	recognize abnormalities
		the blood pressure thresholds for certification, temporary certification, and disqualification		
		the hypertension discussion and recommendations in the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		
		FMCSA Medical Program FAQ responses to • "Why are the diagnosis and treatment of hypertension important?" • "What is the basis of FMCSA's recommendations regarding high blood pressure?"		
d. additional signs of disease (e.g., edema, bruits, diaphoresis, distended neck veins)	**51**	the five conditions listed in the *Physical Examination, Body System 8. Vascular System* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		recommendations to assess for signs and symptoms of cardiovascular diseases and disorders made in the 2002 Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers report		
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
8. Examine the driver's lungs, chest, and thorax, excluding breasts, and note				
a. respiratory rate and pattern	**52**	the five signs and symptoms listed in the *Physical Examination, Body System 6. Lung and Chest* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		respiratory rate and patterns and the possible underlying causes of those symptoms in the 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* report		
b. abnormal breath sounds	**53**	the five signs and symptoms listed in the *Physical Examination, Body System 6. Lung and Chest* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		breath sounds definitions and discussion in the 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* report		
c. abnormal chest wall configuration/ palpation	**54**	the five signs and symptoms listed in the *Physical Examination, Body System 6. Lung and Chest* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		chest wall deformity definitions and discussion in the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report		
d. scars	**55**	three respiratory system surgical procedures in the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report		identify scars typically associated with pulmonary procedures
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		
9. Examine the driver's abdomen, and note				
a. surgical scars	**56**	the six conditions listed in the *Physical Examination, Body System 7. Abdomen and Viscera* of the Medical Examination Report in 49 CFR §391.43		identify scars typically associated with abdominal procedures

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		
b. an enlarged liver or spleen	**57**	the six conditions listed in the *Physical Examination, Body System 7. Abdomen and Viscera* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		pulmonary conditions, the symptoms of which include distended neck veins, enlarged liver, and edematous lower extremities, as indicated in the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report		
c. abnormal masses or bruits/pulsation	**58**	the six conditions listed in the *Physical Examination, Body System 7. Abdomen and Viscera* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		
d. abdominal tenderness	**59**	the six conditions listed in the *Physical Examination, Body System 7. Abdomen and Viscera* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		
e. hernias (e.g., inguinal, umbilical, ventral, femoral)	**60**	the six conditions listed in the *Physical Examination, Body System 7. Abdomen and Viscera* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
10. Examine the driver's spine and note				
a. surgical scars and deformities	**61**	the four conditions listed in the *Physical Examination, Body System 11. Spine and Other Musculoskeletal* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		
b. tenderness and muscle spasm	**62**	the four conditions listed in the *Physical Examination, Body System 11. Spine and Other Musculoskeletal* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		
c. loss in range of motion and painful motion	**63**	the four conditions listed in the *Physical Examination, Body System 11. Spine and Other Musculoskeletal* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		
d. kyphosis, scoliosis, or other spinal deformities	**64**	the four conditions listed in the *Physical Examination, Body System 11. Spine and Other Musculoskeletal* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		pulmonary implications of spinal deformities, discussed in the 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* report		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
11. Examine the driver's extremities and note				
a. gait, mobility, and posture while bearing his or her weight; limping or signs of pain	**65**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		49 CFR 391.41(b)(1) and (b)(2) • limb and limb impairment standards • medical advisory criteria		
		the 1988 *Conference on Neurological Disorders and Commercial Driver report, Appendix A,* • the "Guide for the Functional Assessment of Commercial Drivers" • neuromuscular diseases and disorders		
b. loss, impairment, or use of orthosis	**66**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of the Medical Examination Report in 49 CFR 391.43	performing screening tests for strength and weight bearing to the extent required for safe operation of CMVs	assess screening test results for strength and weight bearing
		the limb and limb impairment standards in 49 CFR 391.41(b)(1) and (b)(2)		
		medical advisory criteria in 49 CFR 391.41(b)(1) and (b)(2)		
		49 CFR 391.49 • the alternative physical qualification standards for the loss or impairment of limbs • medical advisory criteria		
		the Skill Performance Evaluation resource information available at http://www.fmcsa.dot.gov/rules-regulations/topics/medical/spepackage.htm		
c. deformities, atrophy, weakness, paralysis, surgical scars	**67**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
d. elbow and shoulder strength, function, and mobility	**68**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		
e. handgrip and prehension relative to requirements for controlling a steering wheel and gear shift	**69**	conditions, signs and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		
f. varicosities, skin abnormalities, and cyanosis, clubbing, or edema	**70**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		conditions for which varicosities, skin abnormalities, and cyanosis, clubbing, or edema are signs and symptoms reported in the following reports • 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* • *1988 Conference on Neurological Disorders and Commercial Driver* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
g. leg length discrepancy; lower extremity strength, motion, and function	**71**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 10. Extremities – Limb Impaired* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		
12. Examine the driver's neurologic status and note				
a. impaired equilibrium, coordination or speech pattern (e.g., Romberg, finger to nose test)	**72**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 12. Neurological* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		the level of evaluation for neurological conditions, as described in 49 CFR 391.43(f)		
		the 1988 *Conference on Neurological Disorders and Commercial Driver* report • *Appendix A,* the "Guide for the Functional Assessment of Commercial Drivers" • conditions and disorders that may impair equilibrium, coordination, or speech pattern		
b. gait disorders	**73**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 12. Neurological* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		the 1988 *Conference on Neurological Disorders and Commercial Driver* report, *Appendix A* • the "Guide for the Functional Assessment of Commercial Drivers" • conditions and disorders that may impair gait		
c. sensory or positional abnormalities	**74**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 12. Neurological* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		Appendix A, the "Guide for the Functional Assessment of Commercial Drivers" in the 1988 *Conference on Neurological Disorders and Commercial Driver* report		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
d. tremor	**75**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 12. Neurological* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
		the 1988 *Conference on Neurological Disorders and Commercial Driver* report • *Appendix A,* the "Guide for the Functional Assessment of Commercial Drivers" • conditions and disorders that may cause tremors		
e. radicular signs	**76**	proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)	proficiently using medical protocols and techniques	recognize abnormalities
f. reflexes (e.g., asymmetric deep-tendon, normal / abnormal patellar and Babinski	**77**	conditions, signs, and symptoms listed in the *Physical Examination, Body System 12. Neurological* section of the Medical Examination Report in 49 CFR 391.43	proficiently using medical protocols and techniques	recognize abnormalities
13. Test the driver's urine and note specific gravity, protein, blood, and glucose	**78**	four urine test values required to be recorded in the Medical Examination Report example form and their possible implications, stated in 49 CFR 391.43 *Section 6, Laboratory and Other Test Findings*	proficiently using laboratory protocols and techniques	discriminate between unreliable results and abnormalities
				recognize abnormalities
		the FMCSA response to the Medical Program FAQ "May a Medical Examiner qualify a driver who has blood in his urine?"		
14. Examine the driver's mental status and note				
a. comprehension and interaction	**79**	the level of evaluation for mental status, as discussed in 49 CFR 391.43(f)	proficiently using medical protocols and techniques	recognize abnormalities
		conditions discussed in the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* report that may be a sign or symptom of CNS damage		
		the recommended initial mental status screening discussed in the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* report		
b. cognitive impairment (e.g.,	**80**	the level of mental status evaluation in 49 CFR 391.43(f)	proficiently using medical protocols and	recognize abnormalities

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
orientation, intellect, memory, obsessions, circumstantial / tangential speech)		the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* report • conditions that may be a sign or symptom of CNS damage • recommended initial mental status screening	techniques	
c. signs of depression, paranoia, antagonism, or aggressiveness that may require follow-up with a mental health professional	**81**	the level of mental status evaluation in 49 CFR 391.43(f)	proficiently using medical protocols and techniques	recognize abnormalities
		conditions discussed in the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* report that may be a sign or symptom of CNS damage		
		the recommended initial mental status screening discussed in the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* report		
C. Diagnostic Tests and/or Referrals				
1. Obtain additional information when indicated by				
a. audiometrics	**82**	threshold values for audiometric hearing tests, as discussed in 49 CFR 391.43 *Section 4. Hearing*		evaluate whether an examinee meets minimum FMCSA criteria to safely operate a CMV
		criteria for when a failed audiometric test requires additional testing, as stated in 49 CFR 391.43(f)		
		FMCSA responses to Medical Program FAQs • "What are the hearing requirements for CMV drivers?" • "When is audiometry required?" • "What tests are used to determine if a driver has adequate hearing to drive safely?"		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
b. cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction, vascular studies)	**83**	threshold values for the cardiovascular tests, including but not limited to, exercise tolerance test, electrocardiogram, and echocardiogram discussed in the *2002 Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		determine when a driver's medical condition warrants the opinion of a specialist before the qualification decision is made compare a driver's cardiac function to FMCSA qualification guidelines and standards
c. blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	**84**	conditions outlined in the *2002 Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report for which the panel recommendation included additional blood tests		determine when blood tests indicate a referral is advised compare a driver's results to FMCSA qualification guidelines and standards
d. chest radiograph	**85**	conditions for which the panel recommendation included chest radiography, discussed in the • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report • 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report		assess an image or a radiologist's interpretation of an image
e. respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	**86**	threshold values for respiratory testing, including chest radiography, as outlined in the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report		assess results and recommendations from a specialist
f. sleep studies	**87**	recommendations regarding sleep studies, as indicated in the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report FMCSA Medical Program FAQ responses to • "Is Sleep Apnea disqualifying?" • "For how long is my medical certificate valid?" • "Can a driver who has a condition that causes excessive daytime sleepiness be certified?"		assess results and recommendations from a specialist

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		sleep study tests, as addressed in the 1988 *Conference on Neurological Disorders and Commercial Drivers* report		
g. drug level monitoring (e.g., digoxin, theophylline)	**88**	medication monitoring, as discussed in the 1988 *Conference on Neurological Disorders and Commercial Drivers* report		correlate results with clinical condition
		drug level monitoring, recommended in the 1991 *Conference on Psychiatric Disorders and Commercial Drivers* and the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* reports		
h. other tests	**89**	proficient use of medical protocols necessary to perform CMV driver physical examinations adequately, as discussed in 49 CFR 391.43(c)(2)		correlate results with clinical condition
		medical examiners' responsibilities to perform additional tests, as needed, to evaluate adequately the driver's fitness to operate a CMV safely (outlined in the general information section of 49 CFR 391.43)		
2. specialist or primary care provider ▪ vision (e.g., retinopathy, macular degeneration)	**90**	medical examiners' responsibilities to obtain ancillary medical evidence, as needed, to evaluate adequately the driver's fitness to operate a CMV safely (outlined in the general information section of 49 CFR 391.43)		determine when a driver's medical condition warrants ongoing monitoring by a specialist and/or primary

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
▪ cardiac (e.g., myocardial infarction, coronary insufficiency, blood pressure control) ▪ pulmonary (e.g., emphysema, fibrosis) ▪ endocrine (e.g., diabetes) ▪ musculoskeletal (e.g., arthritis, neuromuscular disease) ▪ neurologic (e.g., seizures) ▪ sleep (e.g., obstructive sleep apnea) ▪ mental/emotional health (e.g., depression, schizophrenia)		FMCSA responses to Medical Program FAQs • "How long does it take to get my medical certificate once my medical examination is complete?" • "May a Medical Examiner qualify a driver who has blood in his urine?" • "What are the criteria used to determine if a driver with lung disease can be certified?" • "Is Sleep Apnea disqualifying?" • "Can a driver who has a condition that causes excessive daytime sleepiness be certified?" • "If the driver admits to regular alcohol use, and based on responses on the driver history, further questioning or additional tools such as CAGE, AUDIT or TWEAK assessments, may the examiner require further evaluation prior to signing the medical certificate?"		care provider before the qualification and/or certification interval decision is made
		five vision conditions that the medical examiner is to ask about and refer when needed, as indicated in 49 CFR 391.43 Medical Examination Report*; Physical Examination, Body System 7. Eyes*		
		testing requirements outlined for CMV drivers with impairment in one eye qualified by operation of 49 CFR 391.64 (b)(1)–(b)(3)		
		testing requirements outlined for CMV drivers with impairment in one eye who have been granted the FMCSA vision exemption		
		testing and evaluation recommended for assessing CMV drivers' with cardiovascular diseases in the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report • pulmonary history, signs, and symptoms; recommended additional testing to assess the CMV driver's fitness status • recommended sleep disorder tests		
		plasma glucose control thresholds for which additional testing is recommended, as discussed in the July 1988 *Conference on Diabetic Disorders and Commercial Drivers* report		
		testing requirements for insulin-taking diabetic CMV drivers qualified by operation of 49 CFR 391.64(a)(1)–(a)(2v)		
		testing requirements for insulin-taking diabetic CMV drivers granted the FMCSA diabetes exemption		
		the 1988 *Conference on Neurological Disorders and Commercial Drivers* report • musculoskeletal signs and symptoms for which additional testing is recommended • neurological signs and symptoms for which additional testing is recommended • recommended sleep disorder tests		
		the 1991*Conference on Psychiatric Disorders and Commercial Drivers* report • psychiatric signs and symptoms for which additional testing is recommended		
		specialists required requirements in alternative physical qualification standards for the loss or impairment of limbs for CMV drivers (FMCSA has granted a Skill Performance Evaluation) in 49 CFR 391.49		
3. Refer a driver with limitations in extremity movement for an on-road performance evaluation and/or skill performance evaluation	**91**	49 CFR 391.43 Medical Examination Report*;* the medical examiner's role in the certification of drivers with limb limitations		distinguish between clinical conditions that require on-the-road and skill performance evaluations
		fixed deficits CMV drivers may have that meet standards in 49 CFR 391.49		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
4. Refer a driver for conditions not directly related to certification, but detected during the examination	**92**	medical examiners' responsibilities to advise CMV drivers to seek appropriate medical evaluation and care as needed to maintain driver's fitness to operate a CMV safely, as outlined in the general information section of 49 CFR 391.43		identify potential diagnoses
		FMCSA responses to the Medical Program FAQs • "How long does it take to get my medical certificate once my medical examination is complete?" • "May a Medical Examiner qualify a driver who has blood in his urine?"		provide a driver the opportunity to seek primary care that optimizes his or her general health
D. Documentation of Ancillary Information				
1. Record/include results as available with other information about the driver, which may include				
a. audiometrics	**93**	audiometric values, standards and restrictions that should be reported in the 49 CFR 391.43 Medical Examination Report, Section 4, Hearing		report results in the ANSI standard
		the FMCSA Medical Program FAQ response to "What are the hearing requirements for CMV drivers?"		apply FMCSA standard hearing thresholds to ancillary documentation
b. cardiovascular studies (e.g., electrocardiogram, stress test, ejection fraction,	**94**	thresholds for cardiovascular tests as indicated in the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		apply FMCSA standards, guidance advisory criteria, and conference study recommendations for

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
vascular studies)		FMCSA Medical Program FAQ responses to • "If a driver had a Myocardial Infarction (MI), followed by coronary artery bypass graft (CABG) several months ago, should he have an exercise tolerance test as recommended in the MI guidelines, but not in the CABG guidelines?" • "What is a satisfactory exercise tolerance test?" • "Can I drive a commercial vehicle after having angioplasty/stents inserted into my heart?"		cardiovascular thresholds to the results
c. blood analyses (e.g., creatinine, electrolytes, toxicology, lipids, blood chemistries)	**95**	risk factors for cardiovascular disease, as discussed in the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		document results with any interpretations
d. chest radiograph	**96**	the FMCSA Medical Program FAQ response to "What are the criteria used to determine if a driver with lung disease can be certified?		document results with any interpretations
e. respiratory tests (e.g., spirometry, diffusion, lung volumes, oximetry or arterial blood gas analysis with or without exercise)	**97**	pulmonary test thresholds, as addressed in the 1991 *Conference on Pulmonary / Respiratory Disorders and Commercial Drivers* report FMCSA Medical Program FAQ responses to • "Can a driver on oxygen therapy be qualified to drive in interstate commerce?" • "What are the criteria used to determine if a driver with lung disease can be certified?"		apply FMCSA standards, guidance advisory criteria, and conference study recommendations for pulmonary thresholds to the results
f. sleep studies	**98**	sleep disorder tests recommended in the 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* report FMCSA Medical Program FAQ responses to • "Is Sleep Apnea disqualifying?" • "Can a driver who has a condition that causes excessive daytime sleepiness be certified?"		document results with any interpretations

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
g. drug level monitoring (e.g., digoxin, theophylline)	**99**	prescription medications and blood level monitoring, as discussed in the following reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		document results with any interpretations
h. other tests	**100**	the FMCSA Medical Program FAQ response to "Is a driver on kidney dialysis disqualified?"		document results with any interpretations
i. treating physician's work release	**101**	the FMCSA Medical Program FAQ response to "Can I still get a medical certificate if I have a medical condition that is being treated by a physician?"		document results with any interpretations
2. Integrate a specialist's evaluation with other information about the driver	**102**	FMCSA medical program FAQ responses to • "Can a driver who takes nitroglycerin for angina be certified?" • "Can I still get a medical certificate if I have a medical condition that is being treated by a physician?"		document results with any interpretations
3. Include an annual ophthalmologist's or optometrist's report for a driver who was qualified under a vision exemption	**103**	requirements that drivers must meet for vision exemption, defined in 49 CFR 391.64 (b)(1)–(b)(2) and 49 CFR 391.43 (e) the three vision exemption documents available from the FMCSA web site, http://www.fmcsa.dot.gov/rules-regulations/topics/medical/exemptions.htm		document results with any interpretations
4. Include information for a driver who is qualified under a diabetes exemption, which includes an endocrinologist's and ophthalmologist's/ optometrist's report as required	**104**	requirements drivers must meet for diabetes exemption defined in 49 CFR 391.64 (a) and 49 CFR 391.43 (e) the diabetes exemption documents available from the FMCSA web site, http://www.fmcsa.dot.gov/rules-regulations/topics/medical/exemptions.htm		c

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
5. Include if available				
a. a current skill performance evaluation certificate	**105**	alternative physical qualification standards for the loss or impairment of limbs, as addressed in 49 CFR 391.49		
b. documentation of intracity zone exemption	**106**	the definition for "intracity zone" in 49 CFR 390.5 the responsibility to provide documentation outlined in 49 CFR 391.43(d) the provisions for limited exemptions for intracity zone drivers in §391.62		
6. Review results of SAP evaluations for alcohol and drug use and/or abuse for a driver with				
a. alcoholism who completed counseling and treatment to the point of full recovery	**107**	medical advisory criteria for alcoholism in 49 CFR 391.41(b)(13) substance abuse professionals and the return-to-duty process in §40.311, which defines the requirements concerning SAP reports in 49 CFR Subpart O FMCSA medical program FAQ response in • "How do Medical Examiners differ from Medical Review Officers?" Interpretation for Subpart E — Physical Qualifications and Examinations, 49 CFR 391.41 (b)(13) Physical qualifications for drivers, Question 6, "If an interstate driver tests positive for alcohol or controlled substances under part 382, must the driver be medically re- examined and obtain a new medical examiner's certificate to drive again?		document results with any interpretations
b. prohibited drug use who shows evidence he or she is now free from such use	**108**	the medical advisory criteria for drug abuse in 49 CFR 391.41(b)(13) substance abuse professionals and the return-to-duty process in §40.311, which defines the requirements concerning SAP reports in 49 CFR Subpart O		document results with any interpretations

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		FMCSA medical program FAQ response in • "How do Medical Examiners differ from Medical Review Officers?"		
		Interpretation for Subpart E — Physical Qualifications and Examinations, 49 CFR 391.41 (b)(13) Physical qualifications for drivers, Question 6, "If an interstate driver tests positive for alcohol or controlled substances under part 382, must the driver be medically re- examined and obtain a new medical examiner's certificate to drive again?		
		FMCSA medical program FAQ responses in • "Can a CMV driver be disqualified for using a legally prescribed drug?" • "Can a driver be qualified if he is taking Methadone?"		
II. DETERMINATION OF DRIVER'S QUALIFICATIONS AND DISPOSITION				
A. Health Education Counseling				
1. Explain to a driver consequences of non-compliance with a care plan for conditions that have been advised for periodic monitoring with primary healthcare provider	**109**	49 CFR 391.43 Medical Examination Report general information instructions for conditions which do not indicate that certification of physical fitness should be denied		effectively communicate with drivers
		49 CFR 391.43 Medical Examination Report general information instructions to medical examiners to "encourage appropriate remedial care"		
2. Advise a driver				
a. regarding side effects and interactions of medications and supplements (e.g., narcotics, anticoagulants, psychotropics) including those acquired over the counter (e.g.,	**110**	49 CFR 391.43 Medical Examination Report general information instructions to medical examiners and Section 2, Health History, to "discuss" medications		effectively communicate with drivers
		49 CFR 391.41 interpretation of physical qualifications for drivers, question 4 (Methadone usage)		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
antihistamines, cold and cough medications) that could negatively affect his or her driving		medications discussed in the following reports • Conference *on Pulmonary/Respiratory Disorders and Commercial Drivers* • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* • *Conference on Diabetic Disorders and Commercial Drivers*		
		FMCSA medical program FAQ responses to • "What medications disqualify a CMV driver?" • "Can CMV drivers be qualified while being prescribed Provigil (Modafinil)?" • "Can a CMV driver be disqualified for using a legally prescribed drug?" • "Can a driver be qualified if taking prescribed medical marijuana?" • "Can a driver be qualified if he is taking Methadone?		
b. fatigue, lack of sleep, undesirable diet, emotional conditions, stress, and other illnesses can affect safe driving	**111**	49 CFR 391.43(f) instructions for performing and recording physical examinations, including the general information provided in the Medical Examination Report		effectively communicate with drivers
c. with contact lenses he or she should carry a pair of glasses while driving	**112**	the recommendation for drivers certified with corrected lenses, as indicated in the 1991 *Visual Disorders and Commercial Drivers* report		effectively communicate with drivers
d. with a hearing aid he/ she should possess a spare power source for the device while driving	**113**	the recommendation for drivers certified with hearing aids, as discussed in the 1991 *Visual Disorders and Commercial Drivers* report		effectively communicate with drivers
e. who has had a deep vein thrombosis event of risks	**114**	the 49 CFR 391.43 Medical Examination Report; instructions to the medical examiner; general information regarding when to advise drivers		effectively communicate with drivers

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
associated with inactivity while driving and interventions that could prevent another thrombotic event		the recommendation for drivers with DVT, as discussed in the 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* report		
f. who has diabetes about glucose monitoring frequencies and the minimum threshold while driving	**115**	standards for drivers with established medical history or clinical diagnosis of diabetes mellitus, as discussed in 49 CFR 391.41		effectively communicate with drivers
		recommendations for monitoring glucose levels discussed in the 1988 *Conference on Diabetic Disorders and Commercial Drivers* report		
		recommendations regarding diabetic drivers using hypoglycemic drugs, discussed in guidance for 49 CFR 391.41(b)(3)		
g. with a diabetes exemption, he/she should				
1) possess a rapidly absorbable form of glucose while driving	**116**	provisions in 49 CFR 391.64(a) for insulin-taking drivers to meet to be qualified		effectively communicate with drivers
		provisions in FMCSA diabetes exemption documents for insulin-taking drivers to meet to be qualified		
2) self-monitor blood glucose one hour before driving and at least once every four hours while driving	**117**	provisions in 49 CFR 391.64(a) for insulin-taking drivers to meet to be qualified		effectively communicate with drivers
		provisions in FMCSA diabetes exemption documents for insulin-taking drivers to meet to be qualified		
3) comply with each condition of his/her exemption	**118**	provisions in 49 CFR 381.330a for insulin-taking drivers granted an FMCSA diabetes exemption		effectively communicate with drivers
		provisions in FMCSA diabetes exemption documents for insulin-taking drivers to meet to be qualified		
4) plan to submit glucose monitoring logs for each annual recertification	**119**	provisions in 49 CFR 391.64(a) for insulin-taking drivers to meet to be qualified		effectively communicate with drivers
		provisions in 49 CFR 381.330a for insulin-taking drivers granted an FMCSA diabetes exemption		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		recommendations for classifying glucose levels, as discussed in the 1988 *Conference on Diabetic Disorders and Commercial Drivers* report		
3. Inform the driver of the rationale for delaying or potentially disqualifying certification, which may include ▪ the immediate post-operative period ▪ a vision disability (e.g., retinopathy, macular degeneration) ▪ a cardiac event (e.g., myocardial infarction, coronary insufficiency) ▪ a chronic pulmonary exacerbation (e.g., emphysema, fibrosis) ▪ uncontrolled hypertension ▪ endocrine dysfunctions (e.g., diabetes) ▪ musculoskeletal challenges (e.g., arthritis, neuromuscular disease) ▪ a neurologic event (e.g., seizures, stroke, TIA) ▪ a sleep disorder (e.g., obstructive sleep apnea) ▪ mental health dysfunctions (e.g., depression, bipolar)	**120**	criteria for certification of CMV drivers in • 49 CFR 391.41–49 • 49 CFR 391.64		effectively communicate health and regulatory information to drivers
		recommendations for disqualifying drivers discussed in the following reports • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers* • *Conference on Diabetic Disorders and Commercial Drivers*		
		FMCSA medical program FAQ responses in • “Can CMV drivers be qualified while being prescribed Provigil (Modafinil)?” • “Can a driver who takes nitroglycerin for angina be certified?” • “What medications disqualify a CMV driver?”		
		FMCSA medical program FAQ responses in • ”What medical conditions disqualify a commercial bus or truck driver” • “Is Narcolepsy disqualifying?” • “Is Sleep Apnea disqualifying?” • “Can a driver be qualified if he/she is having recurring episodes of ventricular tachycardia?” • “May a Medical Examiner qualify a driver who has blood in his urine?” • “Is Meniere's Disease disqualifying? • “Can a driver who has a condition that causes excessive daytime sleepiness be certified?”		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		FMCSA medical program FAQ responses in • "Can a driver on oxygen therapy be qualified to drive in interstate commerce?" • "If a driver has had surgery for Meniere's Disease, is the condition disqualifying?" • "Is a driver on kidney dialysis disqualified?"		
B. Risk Assessment				
1. Consider a driver's ability to ▪ couple and uncouple trailers from a tractor ▪ load or unload several thousand pounds of freight ▪ install and remove tire chains ▪ manipulate and secure tarpaulins that cover open trailer ▪ move one's own body through space while climbing ladders; bending, stooping, and crouching; entering and exiting the cab ▪ manipulate an oversized steering wheel ▪ shift through several gears using a manual transmission ▪ perform precision prehension and power grasping ▪ use arms, feet, and legs during CMV operation	**121**	the description of the driver's role in the 49 CFR 391.43 Medical Examination Report the driver's duties, discussed in the following reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 1998 *Visual Requirements and Commercial Drivers* report • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		compare general job demands of a CMV driver to his or her ability to perform determine whether a functional assessment is necessary

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
2. Review Skill Performance Evaluation (SPE) cases				
a. identify terms, conditions, and limitations set forth in a driver's SPE Certificate	**122**	the Skill Performance Evaluation new driver application and renewal driver packages are available online from FMCSA at http://www.fmcsa.dot.gov/rules-regulations/topics/medical/spepackage.htm		
		alternative physical qualification standards for the loss or impairment of limbs, as discussed in 49 CFR 391.64(d)(i)(7 & 8)		
b. ensure an appropriate SPE Certificate from the FMCSA Division Administrator has been granted to a driver who lost a foot, leg, hand, or arm	**123**	the Skill Performance Evaluation Service Centers listed on the FMCSA Web site at http://www.fmcsa.dot.gov/rules-regulations/topics/medical/spepackage.htm		
		alternative physical qualification standards for the loss or impairment of limbs, as discussed in 49 CFR 391.64(d)(i)(7 & 8)		
3. Consider a driver's cognitive ability to ▪ plan a travel route ▪ inspect the operating condition of a tractor and/or trailer ▪ monitor and adjust to a complex driving situation ▪ maneuver through crowded areas ▪ quickly alter the course of vehicle to avoid trouble	**124**	the description of the driver's role in the 49 CFR 391.43 example Medical Examination Report form	proficiently using medical protocols and techniques	evaluate a driver's cognitive function
		FMCSA medical program FAQ response to "Is the certification limited to current employment or job duties?"		
		the driver's duties, discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 1998 *Visual Requirements and Commercial Drivers* report • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
4. Consider general health and wellness factors such as				
a. adverse health effects associated with rotating work schedules and irregular sleep patterns	**125**	the description of the driver's role in the 49 CFR 391.43 example Medical Examination Report form		
		FMCSA medical program FAQ response to "Is the certification limited to current employment or job duties?"		
		the driver's duties, discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
		FMCSA driver regulations related to hours of service for CMV drivers • 49 CFR 380.503(b), entry-level driver training requirements • 49 CFR 383.111, required knowledge • 49 CFR 398.4, driving of motor vehicles • 49 CFR 398.6, hours of service of drivers; maximum driving time • 49 CFR 395.3, maximum driving time for property-carrying vehicles		
b. long-term effects of fatigue associated with extended work hours without breaks	**126**	the description of the driver's role in the 49 CFR 391.43 example Medical Examination Report form		
		FMCSA medical program FAQ response to "Is the certification limited to current employment or job duties?"		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		the driver's duties, discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
c. risk factors associated with common dietary choices available to drivers	**127**	the description of the driver's role in the 49 CFR 391.43 example Medical Examination Report form		
		FMCSA medical program FAQ response to "Is the certification limited to current employment or job duties?"		
		the driver's duties, discussed in the following FMCSA conference reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
d. stressors likely associated with extended time away	**128**	the description of the driver's role in the 49 CFR 391.43 example Medical Examination Report form		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
from a driver's social support system		FMCSA medical program FAQ response to "Is the certification limited to current employment or job duties?"		
		the driver's duties, discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
e. short- and long-term health effects of stress from ▪ tight pickup and delivery schedules ▪ irregular work, rest, and eating patterns / dietary choices ▪ adverse road, weather, and traffic conditions ▪ exposure to temperature extremes, vibration, and noise ▪ transporting passengers or hazardous products	**129**	the description of the driver's role in the 49 CFR 391.43 example Medical Examination Report form		
		FMCSA medical program FAQ response to "Is the certification limited to current employment or job duties?"		
		the driver's duties, discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
5. Integrate FMCSA medical advisory criteria and guidelines regarding a driver's condition into the risk assessment	**130**	distinctions between medical advisory criteria, guidelines, and regulations discussed in • 49 CFR 391.43(c)(1) Medical Examination Report; instructions to the medical examiner • 49 CFR 391.43 Medical Examination Report; interpretation of medical standards		assess the risk of qualifying a driver for future CMV duty
		FMCSA medical program FAQ responses to • "Are there duties related to the FMCSA medical certification?" • "What medical criteria are required to obtain a medical certificate?" • "What are the differences between the medical standards and the medical advisory criteria and the medical guidelines?"		
		the driver's duties, discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991*Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
6. Consider for documented conditions the rate of progression, degree of control, and likelihood of sudden incapacitation (e.g., cardiovascular, neurologic,	**131**	General information and advisory criteria for neurological, rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease • §391.41(b)(7) • 49 CFR 391.43 Medical examination; certificate of physical examination		anticipate the likely progression of a documented disease

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
respiratory, musculoskeletal)		the driver's duties discussed in the following FMCSA reports • 1988 *Conference on Neurological Disorders and Commercial Drivers* • 1988 *Conference on Diabetic Disorders and Commercial Drivers* • 1991 *Conference on Psychiatric Disorders and Commercial Drivers* • 1991 *Conference on Pulmonary/Respiratory Disorders and Commercial Drivers* • *1991 Visual Disorders and Commercial Drivers* • 2002 *Cardiovascular Advisory Panel Guidelines for the Medical Examination of Commercial Motor Vehicle Drivers*		
7. Support the rationale for using FMCSA guidelines that have not been published in regulations yet	**132**	FMCSA medical program FAQ responses to • "What information should the Medical Examiner have available to decide if a driver is medically qualified?" • "Are there duties related to the FMCSA medical certification?" • "What medical criteria are required to obtain a medical certificate?"		access current information from available sources
		the Medical Review Board's role in the FMCSA medical program, including FMCSA medical program FAQ responses to • "How can I get more information or apply to serve on the Medical Review Board (MRB)?" • "What is the Medical Review Board?"		
		a proposed field of vision change in FMCSA's response in the Federal Register/Vol. 70, No. 166/Monday, August 29, 2005		
C. Certification Outcomes and Intervals				
1. Apply nondiscretionary certification standards to disqualify a driver				
a. with a history of epilepsy	**133**	49 CFR 391(b)(8) and 49 CFR 391.43 Medical Examination Report, epilepsy		detect clear evidence of a history of epilepsy

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
		FMCSA medical program FAQ responses to • "What medical conditions disqualify a commercial bus or truck driver?" • "Where may I obtain an application for an epilepsy waiver?" • "Can I get a waiver if I have had a single unprovoked seizure?" • "What are the differences between the medical standards and the medical advisory criteria and the medical guidelines?" • "I operate a CMV in the United States but reside outside of the United States. Can I use my foreign medical certificate?"		
b. with diabetes requiring insulin control (unless accompanied by an exemption)	**134**	49 CFR 391.41(b)(3) and advisory criteria for 49 CFR 391.41(b)(3) 49 CFR 391.43(f) *Diabetes* and 49 CFR 391.64(a)		detect clear evidence of diabetes that requires insulin to control
c. when vision parameters (e.g., acuity, horizontal field of vision, color) fall below minimum standards unless accompanied by an exemption	**135**	49 CFR 391.41(b)(10) and guidance for 49 CFR 391.41, question 3 49 CFR 391.43 (f) *Head/Eyes* and 49 CFR 391.64 (b)		detect when a driver's vision is insufficient for qualification
d. when hearing measurements with or without a hearing aid fall below minimum standards	**136**	49 CFR 391.41(b)(11) and advisory criteria for 49 CFR 391.41(b)(11)		detect when a driver's hearing is insufficient for qualification
2. Disqualify a driver who				
a. is currently taking methadone	**137**	Methadone-specific criteria in • 49 CFR 391.41(b)(12) Physical qualifications for drivers • 49 CFR 391.43(f) Medical Examination Report, instructions to medical examiners, drug use section • the interpretation for 49 CFR 391.41 Physical qualifications for drivers, question 4 FMCSA medical program FAQ response to "Can a driver be qualified if he is taking Methadone?"		detect when a driver uses methadone

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
b. has a current clinical diagnosis of alcoholism	**138**	49 CFR 391.41(b)(13) Physical qualifications for drivers. and advisory criteria for 391.41(b)(13) the interpretation for 49 CFR 391.41 Physical qualifications for drivers, question 6		detect when a driver has a current clinical diagnosis of alcoholism
c. uses a controlled substance including a narcotic, an amphetamine, or another habit-forming drug without a prescription from the treating physician	**139**	49 CFR 391.41(b)(12) Physical qualifications for drivers and advisory criteria for 391.41(b)(12) the interpretation for 49 CFR 391.41 Physical qualifications for drivers, question 4.		detect when a driver uses a controlled substance
3. Disqualify a driver when evidence shows a condition exists that will likely interfere with the safe operation of a CMV, which may include sufficient supporting opinions and information from specialists	**140**	the four absolutes and nine broad areas of discretion for disqualification discussed in the interpretation for 49 CFR 391.41, Physical qualifications for drivers, guidance questions 3 and 5 the three possible determination outcomes for the CMV physical exam in the 49 CFR 391.43 Medical Examination Report and status		synthesize evidence about a driver's condition that is severe enough to warrant disqualification
4. Document the reason(s) for the disqualification and/or referral	**141**	the possible determination outcomes for the CMV physical exam in the 49 CFR 391.43 Medical Examination Report, general information, and status		organize evidence that support driver disqualification
5. Advise a driver of the reasons for a disqualification decision and what a driver could do to become qualified	**142**	general information regarding 49 CFR 391.43 Medical Examination Report; instructions to the medical examiner		effectively communicate with drivers
6. Certify a driver for an appropriate interval	**143**	the maximum length of CMV certification and common shortened intervals listed in the 49 CFR 391.43 Medical Examination Report status section		discern when a potentially disqualifying condition may be mitigated through treatment directed by another medical professional

Task		KSA Statements		
Statement	**#**	**Knowledge of**	**Skill in**	**Ability to**
7. Indicate certification status, which may require ▪ waiver/exemption, which the medical examiner identifies ▪ wearing corrective lenses ▪ wearing a hearing aid ▪ a Skill Performance Evaluation Certificate	**144**	the six restrictions on the CMV driver's medical certificate and the 49 CFR 391.43 Medical Examination Report status section, that the medical examiner may impose when certifying a driver		
8. Advise a driver certified with a limited interval to return for recertification with the appropriate documentation for his or her condition	**145**	the range of certification intervals for which a driver can be certified defined in 49 CFR 391.43 Medical Examination Report; instructions to the medical examiner; general information to the medical examiner recommendations for certification intervals, as discussed in the FMCSA medical conference reports		effectively communicate with drivers
9. Complete a Medical Examination Report and medical certificate/card ▪ ensure use of currently required examination form ▪ ensure the form includes the examiner's name, examination date, office address, and telephone number ▪ ensure the driver signs the medical certificate/card	**146**	instructions to the medical examiner for completing the medical examiner report and certification card presented in • 49 CFR 391.43 • advisory criteria for 49 CFR 391.43 FMCSA medical program FAQ responses to • "Is a release form required to be completed in order for the employer to legally keep the medical certification card on file?" • "Will my employer have access to my medical evaluation?" • "What happens if a driver is not truthful about his/her health history on the medical examination form?" • "Who signs the medical certificate?" • "What if the certifying doctor is no longer available?"		organize information for a driver's medical certificate