Measuring Quality in Workers' Compensation Managed Care Organizations: Technical Manual of Performance Measures

This project was supported by a grant from the Robert Wood Johnson Foundation Workers' Compensation Health Initiative. The Workers' Compensation Health Initiative (WCHI) is housed at the University of Massachusetts Medical School's Center for Health Policy and Research. The goal of the initiative is to support innovations in the financing and delivery of medical care for injured workers that improve the quality of care while containing costs.

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Finally, we thank Benjamin Amick for his extraordinary assistance with the survey, and Peter Rousmaniere for helpful comments overall. The URAC initiative was staffed by Liza Greenberg, RN, MPH. For more information contact URAC at 1275 K Street, NW, Suite 1100 Washington, D.C. 20005. Telephone: (202) 216-9010, web site www.urac.org

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Forward

In 1998 URAC received a grant from the Robert Wood Johnson Foundation Workers' Compensation Health Initiative program to develop a set of standardized performance measures for workers' compensation managed care organizations (MCOs). The goal was to develop a set of measures that would enable MCOs to report standardized information in key areas of health care quality. Standardized performance measures help improve quality of care by informing stakeholders (such as purchasers and patients) about quality, and by providing information to the MCO that can be used in quality improvement initiatives.

URAC is a national non-profit organization that has established accreditation standards for health care organizations. URAC accreditation ensures that managed care organizations have the necessary structures and processes to promote high quality health care and preserve patient rights. URAC's standards address access and availability of care, organizational management, staff training and qualifications, and interactions with patients. Performance measures complement accreditation standards. They are a systematic way to assess the performance and outcomes of an organization. URAC developed the attached performance measures as tools to help MCOs and others examine how well the MCO is delivering care to injured workers.

These performance measures represent the beginning of a standardized framework for reporting information in the workers' compensation managed care environment. The measures are modeled after a tool used in the group health HMO sector called HEDIS (See www.ncqa.org for more information on HEDIS). The measures were based on expert recommendations after review of the best available scientific evidence, as well as the opinions of URAC's advisory committee. The data collection tools presented in this document will help MCOs analyze their operations in ways that will both meet customer demand and enable them to improve quality of care. This manual contains three avenues for collecting and analyzing data relating to health care delivery to injured workers:

- A survey of workers – that collects information on workers' experiences care. Topics include worker access to and satisfaction with care, the information they received about return to work, activity limitations, and injury prevention, and outcomes after workers' compensation medical care.

- A protocol for analyzing data from bills and claims – that provides a standard format for producing statistical tables on cost, utilization, case management referral, and treatment patterns.

- A chart audit tool and instruction manual - for assessing the initial clinical management of injured workers. The audit tool assess quality of care based on physician documentation of appropriate history, physical exam, and instructions on work limitations.

At this point in development, URAC recommends that MCOs use the tools provided in this document to evaluate their own performance and provide data for quality improvement initiatives. The tools have not been fully researched and validated for the purpose of comparing MCO performance, largely because of challenges working with data and interpreting the results. When fully developed, a standardized system for reporting on performance may enable regulators, patients, and purchasers to comparatively assess the quality of care and services

provided by competing MCOs. URAC's instruments will need additional testing before they can be used to validly compare MCO performance.

As URAC developed the performance measure specifications contained in this publication, it became apparent that data and information systems in workers' compensation systems do not routinely have the capability to produce standardized information on care and outcomes. Diversity and shortcoming in data capture, coding, and data transmission capabilities limit the availability of accurate data elements for performance assessment. Assessment of clinical performance is hampered by lack of evidence on the efficacy of most treatment modalities, and by uncertainties interpreting the information given variations in the patient population.

In spite of challenges developing standard performance measures, URAC believes it is important for MCOs providing care to injured workers to move towards public accountability and standardized performance measurement. The attached patient survey, instructions for producing tables on cost, utilization and treatment patterns, and medical record audit instrument are ready for internal use by MCOs. We encourage MCOs to adopt them, and to advocate for improvements in data systems to enable use of these or similar tools in the future.

- All MCOs should be able to survey injured workers who have been treated in the MCO network on their experiences and outcomes as patients. MCOs will need to develop strategies to contact injured workers in a timely manner and encourage survey responses;

- Many MCOs will have access to billing and claims data that will allow them to produce information on cost, utilization and treatment patterns. MCOs may need to work with insurers, TPAs and providers themselves to decrease missing data elements and increase file compatibility;

- Some MCOs will be able to access medical records from network providers, in order to carry out chart audits for clinical quality. In the future, MCOs may use contracts with providers that allow medical record access for quality improvement purposes.

We encourage MCOs to work with the research community to test and validate effective approaches to assessing quality in the workers compensation health care system. Information about ongoing workers' compensation research projects can be found at www.umassmed.edu/workerscomp

About URAC

URAC has issued 2,000 accreditation certificates to more than 500 health care programs doing business in all 50 states. URAC's 10 accreditation programs apply to a range of managed care services. Over 120 million Americans are eligible to receive health care services from companies accredited by URAC. URAC has three accreditation programs that apply to workers' compensation managed care operations:

- **Workers' Compensation Utilization Management** accreditation is the only accreditation program tailored to the unique characteristics of the workers' compensation industry. It provides quality oversight in one of the fastest growing areas of managed care. The standards ensure that appropriately trained clinical staff supervise the utilization review process, and that the organization follows a reasonable and timely process when it makes an initial decision to deny payment for health care.

- **Workers' Compensation Network** accreditation provides a comprehensive assessment of PPO-based workers' compensation networks. The standards cover network management issues, quality management and improvement, provider credentialing, and member protection. The standards require such quality elements as a sound provider selection plan, a plan to ensure that workers have reasonable access to medical services, effective network management, fair and clear methods for providers and workers to appeal decisions, and a MCO commitment to quality improvement. Workers' compensation PPOs may also apply for accreditation as specialty networks under URAC's Health Network Standards.

- **Case Management Program** accreditation standards establish guidelines for the rapidly growing field of case management. The standards address scope of case management services, staff qualifications and training, quality improvement, information management and confidentiality, and other areas of case management program operations.

Additional information about URAC can be found at www.urac.org

About the Robert Wood Johnson Foundation Workers Compensation Health Initiative

The Workers' Compensation Health Initiative is a national program of the Robert Wood Johnson Foundation. The goal of the initiative is to support innovations in workers' compensation that will contain costs and improve the quality of care provided to injured workers. For more information, visit the program's web site at www.umassmed.edu/workerscomp.

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Technical Manual of Performance Measures

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1. 0 Introduction

In 1998 URAC received a grant from the Robert Wood Johnson Foundation Workers' Compensation Health Initiative program to develop a set of standardized performance measures for workers' compensation managed care organizations (MCOs). The goal was to develop a set of measures that would enable MCOs to report standardized information in key areas of health care quality. A standardized framework for reporting information will help MCOs analyze their operations both for meeting customer demand and to improve quality of care. When mature, a standardized system for reporting on performance may enable regulators and purchasers to comparatively assess the quality of care and services provided by competing MCOs.

This document summarizes the research and development process for standardized measures of managed care organization performance in the workers' compensation industry. It also provides a complete rationale for the development of each performance measure, and a draft set of instruments for collection of data from MCOs. These measures of performance should still be considered a "work in progress," since they have not been fully tested for validity and reliability. URAC hopes that workers' compensation MCOs, purchasers and employers will use these tools as a starting point to implement performance reporting initiatives and to further test and validate the proposed measures.

1.1 Approaches to Accountability for Workers' Compensation MCOs

In the general health sector, two primary approaches to public accountability have evolved over the past decade. The approaches, accreditation and performance measurement, are complementary. Accreditation establishes standards for operations of functional areas of an organization, while performance measures are a public reporting of the processes and outcomes of care.

The marketplace has pushed managed care organizations in the health sector to seek voluntary accreditation from national accreditation organizations, and to publicly report performance through standardized measures of performance such as the HealthPlan Employer Data and Information Set (HEDIS®)[1], and the Consumer Assessment of Health Plans Survey (CAHPS®)[2]. Many large purchasers, as well as some state regulators, have spurred market trends by recommending or mandating that health plans seek accreditation and/or report performance. URAC's performance measures were designed to create parallel systems of accountability in the workers' compensation sector.

Currently, workers' compensation MCOs have only accreditation available to them as a tool for public accountability. Since 1996, URAC has offered specialized accreditation programs applicable to workers' compensation MCOs, including Workers' Compensation Utilization Management accreditation, Case Management Organization accreditation, and Workers'

[1] 2000 Health Plan Employer Data and Information Set. National Committee for Quality Assurance, Washington, D.C.
[2] Consumer Assessment of Health Plans Survey (CAHPS®), version 2.0, AHRQ Publication No. 99-0039

Compensation Network accreditation[3]. Accreditation programs typically include a review of MCO policies and procedures, complemented by an on-site verification process conducted by an accreditation auditor. Accreditation standards establish requirements for the operations of MCOs in the areas of personnel qualifications and training, the process for determining medical necessity, management of information, and ongoing quality improvement processes.

Accreditation standards establish a framework for the operations of an MCO and specify how the processes of care must be carried out. Accreditation does not require a company to report on the results of care delivery, e.g. the outcomes. Performance measures provide additional information on how care is delivered and the outcomes of the care management process. URAC's proposed performance measures are designed to address "how the company is doing," and to complement accreditation standards. For example, URAC's accreditation standards require a company to report on the number, specialty and distribution of a network's health care providers, while the proposed performance measures assess workers' perception by asking them to report on their satisfaction with access to care.

1.2 Need for Workers' Compensation MCO Performance Measures

Although managed care techniques are widely used in workers' compensation health care delivery, research on the results has been limited. Injured workers often have limited options when seeking care under the workers' compensation system. The worker may be offered a finite network of providers from which to seek care, or may be subject to utilization management or case management provided by an MCO. For these reasons, injured workers and their advocates have expressed concern that managed care limits choices and may result in under-use of necessary health care services. Concurrently, many insurers and MCOs express concern that injured workers are subject to unnecessary services and poorly qualified providers, factors that drive up costs, lost time, and disability. This divergent perspective underscores the urgency of measuring outcomes of and experiences in managed care. Performance measures are designed to address the concerns of all stakeholders in the workers' compensation system.

Standardized performance measures allow for more rigorous assessment of the quality of care processes and outcomes such as return to work, cost, and satisfaction. The long-term goal for collecting such information in a standardized format is to develop norms, or benchmarks to help determine appropriate outcomes. Such benchmarks, for example, on the "right" duration of disability, cost per injury or level of worker satisfaction are currently not feasible given the differences in measurement techniques. Performance measures will promote more public accountability and enable assessment and comparison of MCO performance.

1.3 What Are Performance Measures?

Performance measures are quantitative reports on an organization's functioning. Performance measures can relate to either the process or the outcomes of system. Ideally, a measure should be based on research evidence indicating that the practice being measured is indeed the best practice. When fully tested and validated, good performance measures provide reliable information on aspects of care that are relevant to good outcomes, and allow for comparison of like organizations.

Data for measuring performance can come from administrative files such as billing data and claims, surveys, or medical records. Part of the process of performance measure

[3] see URAC accreditation standards information at www.urac.org

development is specifying explicit instructions for producing performance information so that companies report performance information in a consistent format, using consistent methodology. Two companies using the methods described in the performance measure instructions would thus report comparable results. URAC's performance measures specifically examine aspects of performance that affect the quality of health care delivered to injured workers (not the financial or administrative performance of an organization).

1.4 The Value of Performance Information

Standardized performance measurement benefits MCOs directly in two key respects:

> *Quality Improvement:* an organization must understand its performance in order to implement changes that improve quality. Each performance measure designed by URAC has implications for quality improvement for the MCO. In fact, one criteria URAC used in development was that measures must relate to aspects of MCO performance that are under the control of the MCO. Thus MCOs can use these tools to engage in quality improvement initiatives. For example, if the MCO learns from the worker survey that patients consistently report a long wait for care, it may implement a program to improve access to network providers.
>
> *Competition:* an MCO that measures and continuously improves its performance will have a competitive edge in the marketplace. The MCO has more information to report to purchasers on the effectiveness of its processes of care, and also has tools for analyzing the processes and outcomes of care. Performance information on clinical quality complements information on cost and efficiency that MCOs already routinely provide to purchasers. Clinical performance information is added-value to purchasers, and enhances MCO claims about cost-effectiveness and improved outcomes resulting from care management programs

Performance information is of value to other stakeholders in the workers' compensation environment as well. Purchasers (either self-insured employers or insurance companies) are a major audience for performance information. Purchasers will be able to use the standardized information produced by MCOs to assess the quality of care provided to injured workers, as well as to understand the MCO's profile of cost, utilization and care management. Employers in particular care about the workers' experience in the managed care system, since care management affects outcomes and ultimately, return to work (RTW). For example, a worker's difficulty accessing care or dissatisfaction with the care may influence timely RTW. Finally, and importantly, a rigorous quality evaluation process in the MCO may help the employer to identify areas of improvement that could facilitate RTW. For example, URAC's survey of injured workers may help employers diagnose workplace factors that influence timely RTW.

Other stakeholders interested in reviewing MCO performance include injured workers or their representatives, such as unions. They can use information on MCOs' performance as a tool for ensuring that workers are getting appropriate care and are satisfied with their experiences in managed care for occupational injuries. Regulators may be interested in periodically assessing MCO performance to ensure that workers rights are protected in mandated or optional managed care arrangements and to examine the effect of managed care on patient experiences and outcomes. Finally, providers may be interested in the performance of their peers and the organization overall, to help them better determine whether to contract with an MCO.

1.5 Who Produces the Performance Information?

The term, "managed care organization" encompasses a wide range of organizational structures. It is defined both in practice and state statute. To clarify the target organization for these performance measures, URAC defined characteristics of MCOs that could be held accountable for performance reporting. In essence, URAC determined that the organization should have the capacity to influence care delivery, e.g. "manage care." The MCO could be an organization that integrates each of the functions, or it could be an organization that purchases the managed care functions separately e.g. a third party administrator (TPA) or insurer.

The measures may also be applicable to vendors that provide one or more managed care services but do not meet the definition of a full service MCO. Purchasers may find it useful to excerpt applicable measures and apply them to single service vendors to assess performance in certain domains for which they are accountable. Note, however, that some of the measures are complementary. For example, measures of cost should be analyzed in the context of outcomes, and measures of utilization should be examined with measures of satisfaction. Such context will help users of information understand if one priority, for example, cost control, is being promoted at the expense of another important dimension of care, such as appropriateness of care.

URAC's working definition of a workers' compensation MCO includes the following functional elements, aligned either within an organization or by contractual arrangements:

- a provider network,
- case/disability management responsibility,
- financial management capacity
- data collection capacity
- responsibility for secondary and tertiary prevention, e.g., preventing complications and disability

URAC expects that MCOs themselves will produce performance information based on analysis of claims and bill data, medical records, and injured worker surveys. URAC's protocols (found in the appendices to this report) provide very detailed instructions on how to report data such that each MCO will produce information on a comparable population of patients using the same data specifications. MCOs will report the information using tables and graphs. Purchasers and other users will be able to quickly look at performance and identify trends in care and management.

1.6 Who Pays for Performance Information?

Most MCOs are already producing some type of performance information for their customers. Under URAC's protocols, MCOs will pay for producing the performance information, but the costs will be offset by changes in other types of performance reporting that they must carry out. The system will be voluntary, so MCOs can choose which measures of performance to report on based on their own and purchaser priorities.

2.0 How the Measures Were Developed

URAC began the initiative by convening a National Advisory Committee (NAC) representing employers, insurers, unions, researchers and federal agencies. The NAC was charged with developing priority areas for measure development. It selected nine areas committee members

believed to be important domains of performance. These areas, and the committee's rationale for inclusion, are listed in Table 1, below.

2.1 Criteria for Selecting Measures

URAC began the process of performance measure development by establishing criteria for selecting measures. These criteria determined whether URAC would investigate the evidence for measuring an aspect of performance, and ultimately, whether URAC would recommend the measure for further testing:

1. The measure must address an *important* aspect of MCO performance
2. The measure must address an aspect of performance that can be *influenced* through the MCO's quality improvement (QI) activities, and
3. The aspect of performance must be under the *control* of the entity being measured, e.g., the MCO.

The measures focus on performance of the managed care organization, not the provider. However, the measures presume that the MCO can influence the volume of services, and through selective contracting, can also influence provider behavior. Thus some measures examine how providers deliver care for occupational injuries. The rationale for measuring provider behavior is that MCOs can use this information to educate providers on treating work-related cases, and to select the most effective providers for the workers' compensation network.

URAC's measures do not examine issues such as the frequency of specific types of injury, since the employer, not the MCO, controls the work place. The measures also do not measure efficiency of MCO administrative operations, since these are only indirectly related to quality of care. URAC expects that purchasers already are requesting and routinely receive reports on MCO efficiency.

2.2 Measure Ratings and Work-Ups

After compiling information on potential measures of performance, URAC asked the NAC to rate the measures in terms of priority and feasibility. Some of the measures were of high importance, e.g. committee members thought MCOs should definitely measure this aspect of performance, but of low feasibility, e.g. data or information is not to be easily and reliably available to report on this aspect of performance. Some measures were ultimately included in the draft performance measure even though our tests indicated that they are very difficult for MCOs to produce. They are included as an indication of their importance. We hope that MCOs will eventually be able to report this information by improving their data systems and data management.

After rating measures for importance, URAC reviewed evidence on the validity of measuring specific aspects of care. The consultant team looked for evidence that specific, measurable components of clinical care or management could be associated with better outcomes. For those aspects of care for which there was the strongest evidence, we developed protocols for measuring specific elements of the care process. In some domains, we could not locate evidence to determine standards of practice. For example, the health services research literature has described higher use of services in workers' compensation medical cases. However, there is no evidence in the literature on whether high cost or high utilization is more likely to be associated with better outcomes than low cost or low utilization. Therefore, rather than recommending a specific benchmark of performance, URAC recommends that MCOs simply collect and report information in a standard format. When complemented by other measures of worker experience and outcomes, eventually, benchmarks of appropriate cost and utilization will be determined. In the meantime, users of performance information (in most cases, the employer), can review the data and compare it to local norms and expectations.

URAC also commissioned a series of papers on aspects of performance measurement and quality. The papers described a framework for determining accountability for primary prevention and prevention of disability, and examined the impact of regulation affecting confidentiality of worker information on data collection. We also developed a protocol for organizing injuries into homogenous groups for the purpose of analyzing care patterns (see Appendix 3).

URAC used the best available scientific evidence to ensure that the measures will be valid, reliable, and feasible to collect. However, there are many limitations in the protocol. As noted, there are major gaps in evidence based information on treatment, care management, and outcomes of occupational injuries. There are also many variations in how MCOs are structured, meaning that not all MCOs will be able to collect all of the performance information. URAC expects that the measure set will be improved over time as MCOs gain experience collecting data and the measures are refined based on initial findings.

3.0 Data Sources for Performance Information

The measure rating and work-up processes determined the specific information to be included as part of the performance measure set. After developing a list of measures, URAC's consultant team developed recommendations for how to best collect data to provide the required information. The consultant team considered multiple sources of information, including:

- Medical records
- Claims data (held by the insurer)
- Billing data (held by the MCO or insurer)
- Survey of injured workers
- Case management data
- Employer data

URAC then asked:

- Could the MCO routinely access that source of data?
- Is the data in a relatively uniform format?
- Would the data from a given source be a valid representation of performance?

Ultimately we recommended three key sources for collecting performance information: administrative/billing data, a worker survey, and medical records review. We consider these three sources to be the most reliable avenues for performance data, in spite of problems identified with completeness and access to data. The three sources are complementary, and can be used individually to respond to specific performance questions, or together, to provide comprehensive information about an MCO's performance.

We eliminated several possible data sources because they are rarely available to the MCO or have insurmountable problems with standardized terminology. For example, we eliminated employer-held data because MCOs are rarely allowed access to employer records. Thus we would not recommend measures based on employer-held data on RTW or job modification. We eliminated case management notes, and many desired measures of case management performance, because there is no way currently to efficiently retrieve information from narrative CM files. Further, definition of terms such as "contact" vary widely.

We recognized limitations in using files intended to monitor financial transactions for measuring quality in clinical management and outcomes. Claims data is essential for producing data on many aspects of performance, including return to work, cost, and utilization. We recognize that many MCOs may not be able to produce performance measures in these areas because of limited access to claims data. However, because claims files are the most common source of information in workers' compensation, we determined that we would need to rely on claims information, however flawed. In addition, there are significant current limitations of using claims files for quality assessment. For example, research has demonstrated that claims files do not give consistent findings on return to work performance. Data elements are often missing, and claim files may not capture subsequent episodes of missed work. URAC's tests validated these research findings.

We also recommend using a patient survey in spite of limitations. Research has shown that surveys are effective at asking certain types of questions, but that individuals may not respond to other questions as accurately. Language barriers and low response rates are also a threat to the quality of survey data. URAC's tests also identified difficulty reaching patients by mail due to bad addresses – perhaps an effect of the patient population or perhaps a result of poor patient contact data entry.

We decided to rely on data sources with known problems only when there was no other reliable source of information on a domain of performance. Our hope is that the demand for improved data will encourage claims payers and MCOs to improve the completeness and reliability of these data sources. Indeed, in the group health sector, demand for information from HMOs has indeed spurred investments in data management capacity and resulted in more sophisticated quality improvement efforts.

4.0 The URAC Workers' Compensation Performance Measures

The proposed set of performance measures for workers' compensation consists of the following elements:

- **A worker survey**: the survey examines injured workers' experience with the managed care organization. The survey provides information relating to the performance areas of access to care, worker perception of assistance with return to work, communication between the worker and the provider, worker functional status before and after the injury, and counseling. The questions in the survey are used to construct two types of measures: rate-based and composite. Rate-based measures divide the number of workers who have a specific response to a question, such as "yes" or "no", by the total number of workers answering a question, while composite measures combine the answers to several questions into a single score. Appendix 4.1 contains the survey as well as suggestions for analyzing the data. Recommendations include suggestions for analyzing the data by as age, sex, job satisfaction and other factors that may affect worker responses.

- **Administrative Measures**: MCOs will be asked to develop measures using information from existing administrative sources-the data files that result from claims administration and provider bill adjudication. MCOs will use this data to provide performance information on cost, utilization, treatment patterns and return to work. Information to be drawn from those data sources includes diagnosis (using ICD-9 codes), procedures (using CPT codes), and costs. Other information available from administrative data includes date of injury, and start

and end of indemnity payments. Appendix 4.2 describes the analyses to be conducted on administrative data and recommends a reporting format for the tables to be produced.

- **Medical Records Measures**: MCOs will be asked to conduct chart reviews on a limited sample of medical records for patients in four diagnostic groups: low back pain; knee injury; shoulder injury; and forearm/wrist/hand injury. This source will provide performance information on the appropriateness of clinical care provided to injured workers. Performance will be assessed by determining the extent that key elements of the physical examination and clinical encounter occurred during the initial visits to the MCO. Appendix 4.3 describes the procedure for auditing medical records and provides audit tools and instructions.

The performance measures, grouped by domain of care, are presented in Table 2.

TABLE 2: LIST OF MEASURES BY CATEGORY

Category of Measure	Name of Measure	Data Source
Access	• Getting needed care • Wait for care	Patient Survey
Coordination of care	• Volume of case managed claims • Timely referral to case management • Timely initial contact by case manager	Administrative
	• Provider involves worker in decisions about going back to work • Provider counsels worker about work changes	Patient Survey
Communication	• Provider communicates well with worker • Provider treats worker with respect	Patient Survey
Work-related Outcomes	• Initial return to work • Premature return to work • Returned to work but had additional lost time • Work-related functioning post injury	Patient Survey
	• Time to return to work • Lost time days • Total compensation days	Administrative
Health Related Outcomes	• Physical functioning post injury – SF-12	Patient Survey
Patient Satisfaction	• With the number of doctors to choose from • With pain management • With MCO doctor seen most often • Changing doctors because dissatisfied • With medical services overall	Patient Survey
Prevention	• Injury prevention counseling	Patient Survey
Appropriateness	For low back pain, shoulder complaint, knee complaint and forearm, wrist and hand complaint: • Adequate medical history • Occupational risk assessment • Appropriate focused physical exam • Appropriate activity modification • Appropriate work restrictions • Attempt to place on modified duty • Appropriate patient education • Re-assessment if injury unimproved	Medical record
	• Provider asks job requirements • Patient education about the injury given • Provider discusses return to work	Patient Survey
Cost	Overall and for 4 injury groups – LBP, shoulder, knee and forearm/wrist/hand injury: • Medical costs • Temporary disability costs • Permanent disability costs • Other benefit costs • Medical service costs	Administrative

Category of Measure	Name of Measure	Data Source
Utilization	• Medical service utilization (overall and for 4 injury groups – LBP, shoulder, knee and forearm/wrist/hand injury) • Treatment patterns for workers with low back pain, sprain and strain • Treatment patterns for workers with pain, sprain and strain of the shoulder • Treatment patterns for workers with pain, sprain and strain of the knee • Treatment patterns for workers with pain, sprain and strain of the forearm, wrist, or hand • Physical medicine encounters • Radiology encounters	Administrative

5.0 Evaluation of Data Collection Instruments

URAC's data collection tools (displayed in Appendix 4) are currently in draft form. They have not been tested fully, largely because we were not able to recruit a large enough sample of MCOs willing to test the instruments on a voluntary basis. MCOs that reviewed the tools commented that it would place them at a competitive disadvantage to test the tools. They would incur one-time testing costs not incurred by their competitors, and would expose their performance to public scrutiny not experienced by other MCOs. Based on the lack of success in voluntary testing of the data collection instruments, URAC's consultant team has concluded that full testing of the tools can only occur with the backing of a dominant purchaser or regulator who can ensure that competing MCOs participate in the pilot testing.

In limited testing of the tools, it also became apparent that data limitations in workers' compensation MCOs are much greater than initially anticipated. The survey of injured workers was hampered by very poor contact files, containing unusable addresses for a high proportion of workers. Files maintained by the MCOs often did not contain data elements such as industry classification, worker gender, or worker date of birth, thus limiting possible analyses to test the validity of survey instruments. Similarly, billing files were frequently not complete with ICD-9 codes, making it impossible to classify data on treatment, utilization or cost by the type of injury. As expected, return to work data fields were often not completed – making it impossible to calculate a fundamental outcome indicator. Finally, MCOs reported tremendous barriers in obtaining medical records for quality improvement analysis. They attributed this difficulty to lack of direct communication with network providers (due to common leasing arrangements), expense of recovering files, and lack of cooperation from providers.

In spite of the lack of rigorous evaluation, these measures do represent a consensus set of indicators for assessing the performance of MCOs. Purchasers, workers, regulators and industry representatives believe that the items selected for measurement are important. Testing would undoubtedly reveal that some of the measures are not technically feasible, resulting in elimination of some of the measures. However, they are a strong first step, and serve as URAC's recommendation for improving data and information on key indicators of performance in the workers' compensation industry. We believe that the measures merit further testing and should be refined as they are implemented in MCOs. We also hope that this set of measures will drive a demand for improved data systems that are configured to enable reporting on performance in many areas, not just claims management.

6.0 Additional Challenges to Developing Valid Measures of Performance

URAC recognized early in the process of developing standard measures that it would be difficult to measure clinical care processes and outcomes of injured workers. Some of the challenges we anticipated include:

- state by state variations in workers' compensation programs,
- lack of evidence regarding the most effective clinical treatments,
- difficulty measuring quality using data systems designed to administer claims,
- difficulty measuring outcomes that may occur intermittently, such as return to work with subsequent lost time, and
- case mix - differences in the workers themselves (including age, sex, co-morbidities and job requirements) that affect outcome

Many measures proposed by URAC are constructed to compensate for these problems. For example, URAC recommends asking injured workers about RTW directly, since the information is often not available to the MCOs. Other problems are addressed in the implementation of the measures – for example, by requesting performance data by state, and establishing a fixed point in the life of the claim to measure certain aspects of care (to avoid measuring activity over a variable period of time). Some of these issues, and URAC's response, are addressed in more detail in the subsequent sections.

6.1 Case mix

Case mix variations present a challenge to interpreting data from workers' compensation systems. Ideally, a measurement system would be designed to compare companies that have similar profiles of insured employers, injured workers, and state compensation systems. However, there is tremendous variability in workers' compensation that affects all aspects of performance measurement. For example, differences in job functions and employer accommodations affect many aspects of performance and outcomes, including RTW. MCOs themselves are not all alike, as their "risk profile" varies. Some MCOs and insurers accept accounts that represent very risky occupations, while others are risk averse. Thus the claims experience and overall costs may be higher in those that insure riskier accounts.

A performance measurement set seeks to identify differences that are related to differences in performance, not differences in the underlying patient population. Some factors that influence the course of treatment and the ultimate RTW in workers' compensation include:

- Worker factors, e.g. age, sex
- Injury Severity
- Worker Job Characteristics, e.g. sedentary, active
- Employer characteristics, e.g. availability of RTW program and/or modified duty jobs

URAC measures were designed to accommodate case mix in two ways. First, we developed a protocol for selecting cases in the sample for analysis that creates homogeneous groups of injury types. For example, we identified a range of diagnostic codes that indicate low back injuries of similar types. This homogeneous population will be the basis for analysis – therefore we would expect to see similar patterns of treatment, referral, cost and utilization across many MCOs. We would not necessarily see similar RTW patterns, however, since this method does not take into account the nature of the injured workers' job, or employer factors that influence RTW.

The survey of injured workers also asks worker to self report factors that may affect the outcome – such as age, prior satisfaction with the job, insurance status and other factors. Responses to the survey can be analyzed in the context of reported responses.

Secondly, case mix will not affect many measures of performance. For example, URAC's injured worker survey asks workers to rate access to providers, their perceptions of how well their provider assessed their job duties in relation to their injury, and how much assistance they got with RTW. Those factors should be consistent across many types of injuries.

6.2 Confidentiality of Worker Information and the Impact of HIPAA

URAC's performance measurement set calls for review of medical records of injured workers to determine if appropriate care has been provided to them. The information from multiple charts is aggregated in quality reports so that no identifying information about an individual worker is revealed. However, chart review may raise concerns about the privacy of workers since at some point in the process, an individual not providing care to the worker has access to individually identifiable health information.

URAC's research on this issue indicated that there is some state-by-state variation. However, it appears that review of medical records for the purpose of collecting quality information, and public release of the data with no individually identifiable information, is permissible under most current state laws. (Chart review is routinely carried out by external auditors working on behalf of health plans reporting HEDIS data.) The workers' compensation system has generally provided little confidentiality of health information of injured workers. Health information is routinely transmitted with claims information for the purpose of determining work-relatedness of the claim and for administering it. Nonetheless, some states have statutory protections for information contained in a worker's confidential medical records. These regulations would pertain to individual release of information, which is not envisioned by URAC's protocols. Rules to implement the federal Health Insurance Portability and Accountability Act (HIPAA) recently added protections for individuals in group health, and may have a spillover effect in workers' compensation.

6.3 Data Availability

Availability and reliability of claims, eligibility and return to work data is a key challenge to the success of the project. As noted above, MCOs reported difficulty accessing all billing information relating to a claim, and also noted that many fields necessary for performance measurement (e.g. diagnosis and treatment codes) are frequently not populated with data. This verifies prior studies that indicated incomplete and inaccurate medical coding, as well as missing or inaccurate fields in claims records are a significant problem in workers' compensation. To produce URAC's recommended performance measures, MCOs may need to develop agreements with insurers or TPAs for confidential transfer of information. Each party in the transaction may need to comply with national standards for electronic data interchange, and with voluntary standards for coding integrity.

Many MCOs are report difficulty obtaining medical record data from providers. While most MCOs have contractual agreements with providers that enable them to request records, the process for actually obtaining the records is slow and cumbersome. Again, this area may need to be negotiated more effectively between the MCO and contracted providers or with the administrative entity for leased networks.

URAC's recommendations have established a high bar for MCOs that wish to produce performance information. URAC believes it is critical to establish expectations for the availability of data, even if MCOs fall short of that expectation at the current time. MCOs must improve data systems to accurately assess quality of care and service in workers' compensation. This performance measurement set creates a demand for accurate information that may be the incentive for system improvements.

6.4 Cost of Performance Information

Another challenge to the ultimate adoption and success of the performance measures is the cost of producing performance information. Infrastructure improvements as well as cost of administering a survey and conducing medical records review will represent a significant investment from workers' compensation MCOs. To some extent, these costs will be offset through reduced costs resulting from quality improvements. However, the value of performance information must be recognized by purchasers such that they are supportive of MCO investments in quality systems

7.0 Conclusion

The science of performance measurement in the workers' compensation industry is still in its infancy. Along with URAC's proposed performance measure set, a number of other promising initiatives are under way. For example, a consortium of researchers is now designing a standard survey that could be administered by state regulators to injured workers to examine the quality of care they received and their experiences in the workers' compensation system. That same initiative creates a database repository for the information, which will allow regulators and researchers to examine trends in care across delivery models and across states.

As an accreditation organization, URAC believes it is critical to continuously improve quality in workers' compensation systems, and to ensure that managed care organizations are accountable to both purchasers and patients for cost and quality of care. Accreditation offers an established program for assessing quality in the structure and process of an organization. We believe these performance measures are a starting point for measuring quality of care and outcomes in workers' compensation managed care arrangements. They can be adopted almost immediately by MCOs for internal use to promote quality improvement. For providing comparative information on MCO performance, they will require extensive additional testing and development. They provide a current roadmap of priority issues and data collection approaches that will be of value to researchers, managed care plans, and policy makers.

8.0 Information About the Appendices

The appendices to this report provide the instruments and information needed to implement a performance reporting program in a managed care organization. As noted, the tools can be adopted immediately by MCOs for collecting data to inform quality improvement activities. The appendices provide the following information:

Appendix 1: contains a list of performance measures that can be produced using the tools developed by URAC. The list includes a rationale for each measure, explaining why the measure is important, and how the information can be used to improve quality within the MCO.

Appendix 2: contains more detailed information on the recommended performance measures. The appendix includes and extended rationale for including specific measures, and selected references for the measures.

Appendix 3: contains a protocol for classifying information from claims to create groups of injuries with similar treatment patterns. The classification protocol allows the MCO to create groups of injuries with low back pain, shoulder pain, knee pain, and forearm/wrist and hand injuries. The classification system depends on availability of diagnosis codes (ICD-9) codes associated with all the injured worker claims relating to a specific injury. The groupings are used in a variety of analyses recommended in the performance measure set, including selecting a sample of medical records for review, and creating statistics on cost, utilization and treatment patterns.

Appendix 4: contains the tools and instructions for collecting data on performance. This includes:

- **4.1 A survey of injured workers**
- 4.1.1 Suggested survey implementation procedures
- 4.1.2 A list of the measures that result from the survey and technical suggestions for reporting the measures
- 4.1.3 Mock tables for presenting selected data from the survey

- **4.2 Instructions for administrative data analysis, including mock tables**
- 4.2.1 Information for mapping information into categories for the purpose of measurement

- **4.3 Instructions for sampling medical records to assess quality of initial treatment**
- 4.3.1 Chart audit tool
- 4.3.2 Instructions for auditors abstracting information on clinical care

APPENDIX 1

URAC WORKER'S COMPENSATION PERFORMANCE MEASURES: DESCRIPTION AND RATIONALE

The following is a summary list of the performance measures to assess the performance of workers' compensation MCOs. The measures are designed to capture aspects of MCO performance of importance to purchasers and insurers, as well as to regulators and injured workers themselves.

Access -- Timely access to medical care is important for clinical reasons as substantial delays may lead to worse outcomes. MCOs should ensure that their network of providers is geographically accessible and provide options for choosing providers, where allowable.

Measure Name	Description	Value of Measure to MCO	Data Source
Getting needed care	Workers who rate getting a provider they were happy with, a referral to a specialist, or care they or a doctor believed necessary as a problem.	If getting needed care is a problem, the MCO may wish to consider increasing its presence near work-sites, or expanding the provider network.	Patient Survey
Wait for care	The number of days between first trying to get care and actually seeing a provider.	The MCO may track the number of days; increases may signal the need to expand the network.	Patient Survey

Coordination of Care – Proper coordination is essential to ensure the efficiency and effectiveness of the medical management process. Effective coordination can result in decreased medical and indemnity costs due to redundant or delayed care, increased appropriateness of care and a positive ultimate case outcome.			
Measure Name	**Description**	**Value of Measure to MCO**	**Data Source**
Number of case managed claims	1. The number of case-managed claims. 2. The number of case-managed claims as a percent of all claims injured during the case-finding period.	This measure helps the MCO understand other measures of performance in relation to its care management processes. An MCO with high costs or extended lost time performance relative to benchmarks may want to consider increasing the use of CM to influence outcomes. (Analysis of this data by customer may be most useful for quality improvement purposes, since customers have different referral criteria and contracts.)	Administrative
Timely referral to case management	1. The number of claims that were referred to case management within 30 days after injury. 2. Claims referred within 30 days as a percent of all claims referred to case management. 3. Average number of days between injury and referral, for all case-managed claims.	Where CM is part of an MCOs services, MCOs may wish to work with purchasers to promote early referral to case management, since there is more potential to influence cost and outcome. (Analysis of this data by customer may be most useful for quality improvement purposes, since customers have different referral criteria and contracts.)	Administrative
Timely initial contact by case manager	1. The number of case-managed claims contacted by a case manager within 7 days of the referral. 2. Number of 7-day contacts as a percent of total claims referred to case management. 3. Average number of days from referral to contact, for all case-managed claims.	This measure will help the MCO understand and improve the efficiency of its case management process.	Administrative
Provider involves worker in decisions about going back to work	Percent of workers who report “a lot” of involvement in the decision to return to work.	MCOs that do not score highly on these measures may increase efforts to assist workers with coordinating with the workplace to ensure timely return to work.	Patient Survey
Provider counsels worker about work changes	Percent of workers who report the MCO doctor talked about work changes.		Patient Survey
Employer helpful with return to work	Percent of workers who report their employer was helpful about helping them return to work		Patient Survey

Communication – Effective communication between providers and patients can result in a better outcome. The MCO should ensure that providers develop therapeutic relationships with patients, and that providers effectively communicate with injured workers.			
Measure Name	**Description**	**Value of Measure to MCO**	**Data Source**
Provider communicates well with worker	Workers who report that their provider listened carefully to them and explained their medical condition in a way they could understand.	Good communication between provider and worker leads to appropriate worker expectations of the healing process and compliance with treatment recommendations, which ultimately facilitates return to work.	Patient Survey
Provider treats worker with respect	Workers who report that their doctor took their medical condition seriously and treated them with respect.	Provider respect for the worker builds trust in the clinical relationship and may increase satisfaction with the MCO. MCOs should ensure that provider in their networks have clinical and psychosocial skills needed to treat injured workers.	Patient Survey

Work-related Outcomes – Return to work is one of the most important outcomes to employers. Although RTW is influenced by many factors, MCOs promote RTW through effective clinical management, appropriate activity limitations and effective coordination with employers on necessary job modification. They are also responsible for ensuring that providers establish appropriate RTW goals with patients so that reinjuries do not occur if patients RTW too soon.

Measure Name	Description	Value of Measure to MCO	Data Source
Initial return to work	The distribution of lost days and the average length of time from date of injury to first return to work.	MCOs can use this measure to assess the effectiveness of their medical management strategies.	Patient Survey
Premature return to work	Workers who report that they went back to work too soon.	MCOs can work with providers to ensure they follow best practices to result in workers returning to work at an appropriate time.	Patient Survey
Returned to work but had additional lost time	Workers who report that they lost additional time from work after returning to work (excluding time off for medical appointments).	MCOs can work with providers to ensure care management approaches are effective at achieving sustained return to work.	Patient Survey
Work-related functioning post injury	Workers who report that their work-related functioning post injury is about the same or better than prior to their injury, for each of 13 items.	MCOs should ensure that MCO network providers are able to achieve optimal functional outcomes.	Patient Survey
Time to return to work	Distribution of lost time claims by interval between injury and return to work: percent within 30 days, within 60 days, within 180 days, and within 18 months (cumulative percents).	This measure helps the MCO understand the patterns underlying cost and utilization outcomes that result from medical management.	Administrative
Lost time days	The total, average (mean) and median number of lost time days (days with wage replacement benefits paid) among all lost time claims.	This measure provides information on the effectiveness of medical management and care coordination, including coordination with employers.	Administrative
Total compensation days	Total compensation days is found for each lost time claim by adding up all wage replacement benefits paid and dividing by the temporary disability per diem rate for the claim.	This measure provides the MCO a more comprehensive measure of the relative success of return to work efforts by taking into account all forms of wage replacement benefit costs.	Administrative

Health-related Outcomes – Health outcomes are of primary importance to an injured worker. Workers have a strong interest in knowing which MCOs will promote medical management techniques that will maximize their health and well-being.			
Measure Name	**Description**	**Value of Measure to MCO**	**Data Source**
Physical functioning post injury	The average score on the survey questions from the SF-12.	This is the standard post-injury functioning measure.	Patient Survey

Patient Satisfaction – Patient satisfaction is an important outcome indicator that may be related to a more positive attitude among workers regarding RTW. It is also an indicator of the MCO's effectiveness at offering a network of acceptable providers and offering effective care coordination techniques.			
Measure Name	**Description**	**Value of Measure to MCO**	**Data Source**
Satisfaction with the number of doctors to choose from	Worker rating of their overall satisfaction with the number of doctors to choose from	If satisfaction with choices is low, the MCO may wish to expand its network.	Patient Survey
Satisfaction with MCO doctor seen most often	Worker rating of their overall satisfaction with the medical care they received from the doctor they saw most frequently.	If satisfaction rates are low, the MCO may expand the provider network, provide assistance to injured workers in seeking appropriate providers, or offer additional options for changing the treating provider.	Patient Survey
Changing doctors because dissatisfied	Percent of workers who report changing doctors at any time during their treatment because they were dissatisfied.	If change rates are high, the MCO may provide workers with increased assistance with initial provider referral. High risk cases for dissatisfaction may need early case management intervention to prevent doctor shopping.	Patient Survey
Satisfaction with pain management	Worker rating of their overall satisfaction with their pain management, among workers who report having pain.	If satisfaction rates are low, the MCO may implement a quality improvement initiative to ensure that providers are educated on pain management guidelines.	Patient Survey
Satisfaction with job modifications	Workers rating of their satisfaction with job modification and the proportion of those reporting that changes were needed but not made	If patients consistently report dissatisfaction with job modifications, the MCO may work with the employer to develop more effective worksite RTW programs, including programs for job modification.	Patient Survey

Satisfaction with medical services overall	Worker rating of their overall satisfaction with all the medical care they received for their injury.	Satisfaction may be related to many factors, including health status, functional outcomes, and coverage of work related injuries. The MCO may correlate responses to this question with information about provider choice, RTW and satisfaction with specific elements of care to "drill down" on factors that influence patient outcomes.	Patient Survey

Prevention – MCOs are usually not required to carry out risk management at employer sites; they are responsible for medical management after an injury occurs. However, MCOs that ensure that their network providers address occupational injury prevention with injured workers may reduce costs and disability by preventing recurrence of injuries.

Measure Name	Description	Value of Measure to MCO	Data Source
Injury prevention counseling	Workers who agree or strongly agree that their doctor provided information on how to prevent recurrence of their injury.	Low prevention counseling rates may be an opportunity for MCOs to work with providers to improve their prevention counseling skills, or for the MCO to provide direct patient education on reinjury prevention.	Patient Survey

Appropriate Clinical Care – Appropriate assessment, diagnosis and counseling at initial clinical visits is a critical factor in ensuring effective clinical management. The provider's recommendations for injury management and activity limitations have a significant impact on the recovery process, duration of injury and RTW. MCOs should ensure that their networks of providers document an effective process of initial clinical management to promote good patient outcomes.

Measure Name	Description	Value of Measure to MCO	Data Source
Adequate medical history	The number of workers with an adequate medical history, including history of trauma, documentation of specific conditions and nature of complaint.	These measures will help MCOs to identify training needs for providers in their networks to ensure that they carry out effective and appropriate occupational exams and work-related recommendations.	Medical Record
Occupational risk assessment	The number of workers with an occupational risk assessment, including a work history and a physician determination of work relatedness.		Medical Record
Appropriate focused physical exam	The number of workers with a focused physical exam, specific to the injury type.		Medical Record
Appropriate activity modification	The number of workers with appropriate activity modification specific to the injury.	MCOs can provide training to providers to ensure that they document best practices in promoting	Medical Record

Appropriate work restrictions	The number of workers with appropriate work modification specific to the injury type and employer notified.	that they document best practices in promoting appropriate return to work.	Medical Record
Attempt to place on modified duty	The number of workers for whom the MCO contacted the employer to arrange modified duty, if indicated.		Medical Record
Appropriate patient education	The number of workers who received appropriate patient education, specific to the injury type.	MCOs can provide training to providers to ensure they carry out and document education that promotes the best outcomes.	Medical Record
Reassessment if injury unimproved	The number of workers receiving a repeat history and physical exam if the injury is unimproved or worsening.	MCOs can work with providers to ensure that they manage cases proactively.	Medical Record
Doctor counsels worker about managing the injury	Workers who report that their doctor discussed what activities they could do, how to manage pain, different treatments, side effects of medications, and when they could return to work.	MCOs may offer supplemental training for network physicians in occupational medicine techniques.	Patient Survey
Doctor asks about job requirements	Workers who report that their doctor talked to them about their daily tasks and duties.	Understanding the constraints and demands on the worker helps the doctor plan the most effective treatment, thereby increasing the likelihood of successful return to work.	Patient Survey
Patient education about the injury given	Workers who report that their doctor discussed with them what to expect, different treatments, side effects of medications and treatments, and activity restrictions.	MCOs can provide training to providers to ensure they carry out education that promotes the best outcomes.	Patient Survey
Provider discusses return to work	Workers who report that their doctor discussed with them the date that they could return to work.	MCOs can work with providers to ensure they follow best practices to result in workers returning to work at an appropriate time.	Patient Survey

Medical Cost - MCOs have a major influence on cost through the price and volume of services. Efficient MCOs will work with providers to ensure that they provide high quality and cost effective services. Cost measures should be evaluated in context with measure of patient satisfaction and return to work. It is essential to measure both medical and indemnity costs over time to evaluate the quality of the medical care and medical management provided to injured workers.

Measure Name	Description	Value of Measure to MCO	Data Source
Medical costs	Total, average (mean) and median medical cost, for all claims, and for claims disaggregated into Medical Only and Indemnity categories. These statistics are also to be reported for claims in four selected diagnosis groups, low back pain, knee sprain/strain, forearm/wrist/hand sprain/strain, and shoulder sprain/strain. URAC has defined these groups by diagnosis codes to ensure consistent comparisons among injured workers.	MCOs with high medical costs compared to benchmarks may wish to examine the causes of this higher cost to determine if they are appropriate given the MCO's population. MCOs should assess medical costs in relation to indemnity costs since they are interrelated.	Administrative
Temporary disability costs	Total, average (mean), and median temporary disability cost, for all claims with such costs. These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative
Permanent disability costs	Total, average (mean), and median permanent disability cost, for all claims with such costs. These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative
Other benefit costs	Total, average (mean), and median value of costs other than Medical, Temporary Disability and Permanent Disability, for all claims, and for claims disaggregated into Medical Only and Indemnity categories. These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative

Medical Cost continued -			
Measure Name	**Description**	**Value of Measure to MCO**	**Data Source**
Medical service costs	Cost statistics are to be reported for all claims, for medical services grouped into specified categories[1]. For each category, report: 1. Amount paid 2. Percent distribution of amount paid among categories 3. Amount paid per claim These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative

[1] Visits and consults
Emergency services
Physical medicine
Psychiatric services
Other nonsurgical services
Musculoskeletal surgery
Neurosurgery
Other surgery and anesthesia
MRI/CT scans
Other radiology
Pharmacy
Inpatient room and board
Other facility charges
Medical-legal services
Special services and reports

Utilization – MCOs manage the volume of services provided to injured workers through the UM process. These measures help the MCO benchmark benchmark its performance to norms, and to detect possible under or over utilization.

Measure name	Description	Value of Measure to MCO	Data source
Medical service utilization	Utilization statistics are to be reported for all claims, for medical services grouped into specified categories[2]. For each category, report: 1. Frequency (number of services provided) 2. Frequency per 1,000 claims These statistics are also to be reported for claims in four selected diagnosis groups (defined below).	Through chronological studies and comparison with other programs, these measures indicate areas in which improvement in efficiency may be possible.	Administrative
Treatment for workers with low back pain, sprain and strain	This is the first of four selected diagnosis groups, for which claims are to be selected on the basis of the diagnosis codes occurring in the provider billing data for each claim. Services in specified categories[3] are to be reported for the low back pain (LBP) group. For each category, report: 1. Percent of claims with the service within the first week after injury 2. Percent of claims with the service within the first four weeks after injury 3. Percent of claims with the service at any time within the interval covered by the data.	These measures help the MCO to examine utilization patterns of network providers in relation to other MCOs, and provide information on intensity of approaches to diagnosis and treatment in the period immediately after injury.	Administrative

[2] Visits and consults; Emergency services; Physical medicine; Psychiatric services; Musculoskeletal surgery; Neurosurgery; Other surgery and anesthesia; MRI/CT scans; Pharmacy; Inpatient room and board; Other facility charges; Medical-legal services; Other nonsurgical services; Other radiology; Special services and reports

[3] Laminectomy of lower back; Arthrodesis of lower back; Injection; Other surgery of spine; Plain films of lower back; CT scan of lower back; MRI of lower back; Other radiology of spine; Physical medicine; Physical therapy modality; Chiropractic services; Hospital inpatient care; Other surgery; Other radiology; Emergency room

Utilization – continued			
Measure name	**Description**	**Value of Measure to MCO**	**Data source**
Treatment for workers with pain, sprain and strain of the shoulder	Services in specified categories[4] are to be reported specifically for workers with diagnoses related to Shoulder injuries. The same statistics are to be reported for the Shoulder group as are defined above for the LBP group.	See comments above for LBP group.	Administrative
Treatment for workers with pain, sprain and strain of the knee	Services in specified categories[5] are to be reported specifically for knee injuries. The same statistics are to be reported for the Knee group as are defined above for the LBP group.	See discussion above for the LBP group.	Administrative
Treatment for workers with pain, sprain and strain of the forearm, wrist, or hand	Services in specified categories[6] are to be reported specifically for Forearm, Wrist, Hand (FWH) injuries. The same statistics are to be reported for the FWH group as are defined above for the LBP group.	See discussion above for LBP group.	Administrative

[4] Excision – shoulder
Injection – shoulder
Rotator cuff repair
Other shoulder repair
Plain films – shoulder
CT scan – upper extremity
MRI – joint of upper extremity
Other radiology
Physical therapy modality
Chiropractic services
Hospital inpatient care
Emergency room
Other surgery
Physical medicine

[5] Diagnostic arthroscopy
Arthroscopic surgery
Incision of knee
Partial meniscectomy
Other surgery
Plain films – knee
CT scan of lower extremity
MRI of joint of lower extremity
Physical therapy modality
Chiropractic services
Hospital inpatient care
Emergency room
Complete meniscectomy
Other excision of knee
Other radiology
Physical medicine

[6] Carpal tunnel release
Injection therapy
Other surgery
Plain film – forearm, wrist, hand
MRI of joint of upper extremity
Other radiology
Nerve conduction study
Chiropractic services
Hospital inpatient care
Emergency room
CT scan of upper extremity
Physical medicine
Physical therapy modality

Utilization – continued			
Measure name	**Description**	**Value of Measure to MCO**	**Data source**
Physical medicine encounters	Report the percent of claims that fall into each of the following ranges relative to number of physical medicine encounters: None, 1 – 5, 6 – 10, 11 – 15, 16 – 20, 21 or more These statistics are to be reported for each of the four diagnosis groups—LBP, Shoulder, Knee, FWH (defined above).	This measure provides a "drill down" of the distribution of the most common single form of treatment for injured workers of all types, and particularly for the four diagnosis groups defined here, allowing the MCO to look for possible over or underutilization.	Administrative
Radiology encounters	Reporting of radiology encounters will be similar to the measure defined above for physical medicine. In this case, the following frequency intervals will be used: None, One, Two, Three or more These statistics are to be calculated for each of the four diagnosis groups—LBP, Shoulder, Knee, FWH.	This measure permits the MCO to drill down on patterns of use for radiology, one of the most common services provided to injured workers, and one which is susceptible to over or under use.	Administrative

APPENDIX 2

URAC WORKER'S COMPENSATION PERFORMANCE MEASURES: RATIONALE AND REFERENCES

The following is a summary list of the performance measures to assess the performance of workers' compensation MCOs. The measures are designed to capture aspects of MCO performance of importance to purchasers and insurers, as well as to regulators and injured workers themselves.

Access -- Timely access to medical care is important for clinical reasons as substantial delays may lead to worse outcomes. MCOs should ensure that their network of providers is geographically accessible and provide options for choosing providers, where allowable.

Measure Name	Description	Value of Measure to MCO	Data Source
Getting needed care	Workers who rate getting a provider they were happy with, a referral to a specialist, or care they or a doctor believed necessary as a problem.	If getting needed care is a problem, the MCO may wish to consider increasing their presence near work-sites, or expanding their network.	Patient Survey
Wait for care	The number of days between first trying to get care, and actually seeing a provider.	The MCO may track the number of days; increases may signal the need to expand the network.	Patient Survey

Extended Rationale:

Timeliness access to medical care is important for clinical reasons as substantial delays may lead to worse outcomes. Long waits can also negatively affect patient satisfaction and lead to "doctor shopping."

Validity and Reliability Testing:

These measures were derived from the Consumer Assessment of Health Plans Survey. They have not been fully tested for validity in an injured worker population.

Potential Case Mix Adjusters:

This measure should be analyzed by type of provider, e.g. medical doctor, physical therapist, chiropractor.

References:

1. CAHPS™ 2.0, Adult Core Questionnaire, Agency for Healthcare Quality and Research
2. California Department of Industrial Relations. What Do Injured Workers Think of Their Medical Care? ©1998,

   Measuring the Performance of the Workers Compensation System, © Benjamin Amick III, Karen Roberts, Glenn Pransky, and Les Boden
4. Safran DG, Kosinski M, Tarlov AR et al. The primary care assessment survey: tests of data quality and measurement performance. Medical Care. 1998; 36(5): 728-739.
5. SF-12® Health Survey, QualityMetric, Inc., Lincoln, Rhode Island

Coordination of Care – Administrative Data Measures: Proper coordination is essential to ensure the efficiency and effectiveness of the medical management process. Effective coordination can result in decreased medical and indemnity costs due to redundant or delayed care, increased appropriateness of care and a positive ultimate case outcome.

Measure Name	Description	Value of Measure to MCO	Data Source
Number of case managed claims	1. The number of case-managed claims. 2. The number of case-managed claims as a percent of all claims injured during the case-finding period.	This measure helps the MCO understand other measures of performance in relation to its care management processes. An MCO with high costs or extended lost time performance relative to benchmarks may want to consider increasing the use of CM to influence outcomes.	Administrative
Timely referral to case management	1. The number of claims that were referred to case management within 30 days after injury. 2. Claims referred within 30 days as a percent of all claims referred to case management. 3. Average number of days between injury and referral, for all case-managed claims.	Where CM is part of an MCOs services, MCOs may wish to work with purchasers to promote early referral to case management, since there is more potential to influence cost and outcome.	Administrative
Timely initial contact by case manager	1. The number of case-managed claims contacted by a case manager within 7 days of the referral. 2. Number of 7-day contacts as a percent of total claims referred to case management. 3. Average number of days from referral to contact, for all case-managed claims.	This measure will help the MCO understand and improve the efficiency of its case management process.	Administrative

Extended Rationale:

Studies show that early case management intervention impacts medical and indemnity costs as well as case/claim outcomes. The effect of case management is affected by the length of time it takes for case management intervention to be initiated. By facilitating early intervention, the case manager is able to impact the treatment plan and coordinate early return to work. Delays in case management referral can also point to delays in injury reporting which has legal, medical and financial ramifications for all concerned. Because of difficulty capturing administrative data relating to case management activity, URAC recommends that this measure be a test measure. MCOs should collect the data for quality improvement purposes, but the data should not be used for comparative purposes.

Validity and Reliability Testing:

These measures are currently being used by the industry, although they have not been validated. Current metrics for measurement are not standardized, e.g. companies vary in use of calendar days vs. business days for all cases.

Coordination of Care: Administrative Data Measures - continued

Measurement Challenges:

Many factors affect measurement metrics and outcomes for measures of case management referral and contact. Some variations that affect measurement and interpretation of results include:

1. Data on case management is often missing from MCO data management systems. In particular, date of referral and dates of contacts may be difficult to identify electronically. Employer held data is not available to the MCO.
2. Method of referral and contact may vary in telephonic and field case management.
3. Referrals may be done based upon employer specifics, i.e. after 2 weeks of lost time, after 6 weeks of modified duty, etc.
4. Statutory regulations governing case management intervention vary from state to state.
5. Use of vocational rehabilitation versus medical management as a case management tool. Many states have regulations which mandate vocational rehabilitation involvement at a certain point in a claim.
6. Intervention may be affected by attorney involvement.
7. Referral may be delayed if cases are first treated in emergency room settings.

Factors impacting the results of this measurement may or may not be under control of the MCO. Some factors which are under MCO control are as follows: case manager case load, procedure for case referral and assignment, staff training, operational policies and procedures, quality management program, supervisory oversight of process, PPO network/contractual relationships with providers, Provider/Employer/Employee education regarding MCO program

Factors which may not be under the control of the MCO include: notification delay, availability of provider/injured worker contact information, provider/injured worker availability and/or cooperation, statutory regulations governing ex-parte communication with provider/injured employee, attorney representation prohibiting contact, lack of contractual relationship with treating provider, initial treatment provided in an emergency care setting

References:

1. Brain, G. and Conlon, M. The Case Management Approach to Work-Related Injuries. *Orthopedic Clinics of North America*. Vol 27, No. 4, October, 1996.
2. Brines, J. et. al. Return to work experience of injured workers in a case management program. AAOHN J 1999;47(8):365-72.
3. Chansky, J. and Cremin, T. Keeping Workers' Compensation Costs Under Control; Milliman & Robertson PERSPECTIVES, August, 1996.
4. Leavenworth, G. Setting Standards for Workers' Comp; Business and Health, October, 1994.
5. Llewellyn, A. Controlling Workers' Compensation Cost: Case Management Reaches its Potential by Coordinating Care and Involved Parties; Continuing Care, May, 1999.
6. Mannon, J. et al. A case management tool for occupational health nurses. AAOHN Journal. 1994. 42(8):365-373.
7. Trends in Workers' Compensation & Workers Compensation Managed Care, 1998-1999; HJH Group, Inc.
8. Wolfe, K. Restoring a Fair Workers' Compensation System for Employer and Employee; Medical Interface, April, 1997.

Coordination of Care – Survey Measures: Proper coordination is essential to ensure the efficiency and effectiveness of the medical management process. Effective coordination can result in decreased medical and indemnity costs that result from redundant or delayed care and increase appropriateness of care.

Measure Name	Description	Value of Measure to MCO	Data Source
Provider involves worker in decisions about going back to work	Percent of workers who report "a lot" of involvement in the decision to return to work.	MCOs that do not score highly on these measures may increase efforts to assist workers with coordinating with the workplace to ensure timely return to work. The MCO may also provide feedback to employers about employee perceptions of employer assistance with RTW.	Patient Survey
Provider counsels worker about work changes	Percent of workers who report the MCO doctor talked about work changes.		Patient Survey
Employer helpful with return to work	Percent of workers who report their employer was helpful about helping them return to work		Patient Survey

Extended Rationale:

In a fragmented delivery system, coordination and integration of services is essential to avoid costly duplication and re-work of services.

Validity and Reliability Testing:

These measures are new and have not been tested.

Potential Case Mix Adjusters:

The items in this scale should be asked of all injured workers, regardless of site of injury or occupational category. The measure should be calculated for those who have returned to work and those who have not yet. Preliminary analyses should also explore whether the results depend on the length of time since the injury.

References:

1. Canadian Medical Association Policy Summary. The physician's role in helping patients return to work after an illness or injury. Can Med Assoc J 1997; 156(5): 680A-680C
2. McGrail, MP, et. al. A comprehensive initiative to manage the incidence and cost of occupational injury and illness. Report of an outcomes analysis. J. Occup Environ Med. 1995; 37(11):1263-8.

Communication – Effective communication between providers and patients can result in a better outcome. The MCO should ensure that providers develop therapeutic relationships with patients, and that they focus communications on work-related issues.

Measure Name	Description	Value of Measure to MCO	Data Source
Provider treats worker with respect	Workers who report that their doctor took their medical condition seriously and treated them with respect.	Respect for the worker builds trust and satisfaction with the MCO.	Patient Survey
Provider communicates well with worker	Workers who report that their provider listened carefully to them and explained their medical condition in a way they could understand.	Good communication between provider and worker leads to appropriate worker expectations of the healing process and compliance with treatment recommendations, which ultimately facilitates return to work.	Patient Survey

Extended Rationale:

Appropriate communication with the patient affects patient outcomes. If the worker cannot understand his or her condition or medical instructions, then he or she cannot comply with recommendations concerning treatment. Effective communication between doctor and patient is essential to improved patient outcomes.

Validity and Reliability Testing:

Questions in this scale are being tested in a multi-state workers' compensation survey. The question about talking in ways the worker can understand has been extensively tested as part of the CAHPS initiative.

Potential Case Mix Adjusters:

The items in this scale should be asked of all injured workers, regardless of site of injury or occupational category. Therefore no risk adjustment is necessary for this measure. Results may vary if some MCOs treat a higher proportion of workers' whose primary language is other than English. However, the MCO should factor communication into network development strategies.

References:

1. Bush, T. et. al. The impact of physician attitudes on patient satisfaction with care for low back pain. Arch Fam Med. 1993; 2(3):301-5.
2. Coleman, V. Physician behaviour and compliance. J. of Hypertension. 1985;3(supp):69-71.
3. Consumer Assessment of Health Plans, CAHPS™, October 1998
4. Epstein, R. et. al. Perspectives on patient-doctor communication. J of Family Practice. 1993 37(4) :377-388.
5. Gordon, et. al. Physician-Patient Communication in Managed Care. *Western Journal of Medicine*, Vol. 163, No. 6. December, 1995.
6. Health and Work Group. Improving the Outcomes of Low Back Pain. The Health Institute at New England Medical Center, 1999
7. Laine C, Davidoff F, Lewis CE, et al. Important elements of outpatient care: A comparison of patients' and physicians' opinions. Annals of Internal Medicine 1996; 125(8): 640-645.
8. Nikolaj, S. Health care management in workers' compensation. Occup. Med. 1998; 13(2): 357-79.
9. Safran DG, Kosinski M, Tarlov AR et al. The primary care assessment survey: tests of data quality and measurement performance. Medical Care. 1998; 36(5): 728-739.
10. Sparks, PJ et. al. Risk characterization, risk communication and risk management: the role of the occupational and environmental medicine physician. J Occup Med. 1993;35(1):13-17.
11. Stewart M. Effective physician-patient communication and health outcomes: A Review. Canadian Medical Journal 1995; 152(9): 1423-1433.
12. Wyman, DO. Evaluating patients for return to work. Am Fam Physician. 1999; 59(4): 844-8.

Work-related Outcomes – Survey Measures: Return to work is one of the most important outcomes to employers. Although RTW is influenced by many factors, MCOs promote RTW through effective clinical management, appropriate activity limitations and effective coordination with employers on necessary job modification. They are also responsible for ensuring that providers establish appropriate RTW goals with patients so that reinjuries do not occur if patients RTW too soon.

Measure Name	Description	Value of Measure to MCO	Data Source
Initial return to work	The distribution of lost days and the average length of time from date of injury to first return to work.	MCOs can use this measure to assess the effectiveness of their medical management strategies.	Patient Survey
Premature return to work	Workers who report that they went back to work too soon.	MCOs can work with providers to ensure they follow best practices to result in workers returning to work at an appropriate time.	Patient Survey
Returned to work but had additional lost time	Workers who report that they lost additional time from work after returning to work (excluding time off for medical appointments).	MCOs can work with providers to ensure care management approaches are effective at achieving sustained return to work.	Patient Survey
Work-related functioning post injury	Workers who report that their work-related functioning post injury is about the same or better than prior to their injury, for each of 13 items.	MCOs should ensure that MCO network providers are able to achieve optimal functional outcomes.	Patient Survey

Extended Rationale:

Administrative data is currently being used to produce many of RTW measures in industry practice. There is evidence, however, that claims systems are not accurate at producing return to work data. URAC recommends using survey measures to complement data derived from administrative data systems. RTW is an area where improvements in data entry and management are essential to producing more accurate outcome measures; additional risk adjustment is also needed.

Validity and Reliability Testing:

RTW outcomes questions are new measures. They have not been fully tested, although prototype measures have been tested in a national project funded by the RWJ Foundation.

Potential Case Mix Adjusters:

Many factors not under the control of the MCO affect RTW. These have not been fully eliminated in the URAC measures; therefore the measures should be considered for "test" purposes and for use in quality improvement, rather than for comparing MCO performance. Results may be influenced by employer related, work-type related, or worker factors. Employer factors include availability of modified duty jobs. Work-type factors include job requirements such as lifting. Worker factors that influence RTW include age, sex, marital status and wage status. If possible RTW should be reported by industry, by state, and by age/sex categories to reduce confounding relating to case mix.

Work-related Outcomes – Survey Measures: - continued

References:

1. Amick, BC, Lerner, D. et. al. A review of health –related work outcomes and their uses, and recommended measures. Spine. 2000 Dec 15; 25(24):3152-60.
2. Dasinger, L. et. al. Duration of work disability after low back injury: a comparison of administrative and self-reported outcomes. *American Journal of Industrial Medicine*. 1999; 35: 619-631.
3. Hashemi, L. et. al. Length of disability and cost of workers' compensation low back pain claims. JOEM. 1997; 39(10) 937-944.
4. Krause N, et. Al. Alternative approaches for measuring duration of work disability after low back injury based on administrative workers' compensation data. Am. J. Ind. Med. 35:604-618, 1999.
5. Lerner, D., Amick, BC, et. al. The work limitations questionnaire. Med. Care. 2001 Jan; 39(1): 72-85
6. Pransky, G, et. al. Outcomes in work-related upper extremity and low back injuries: results of a retrospective study. Am J. Ind. Medicine. 2000 Apr;37(4):400-409.
7. Pransky, G. et. al. "Work-related upper-extremity disorders: prospective evaluation of clinical and functional outcomes. J. Occup Environ Med. 1999 Oct;41(10):884-92.

Work-related Outcomes – Administrative Data Measures: Return to work is one of the most important outcomes to employers. Although RTW is influenced by many factors, MCOs promote RTW through effective clinical management, appropriate activity limitations and effective coordination with employers on necessary job modification. They are also responsible for ensuring that providers establish appropriate RTW goals with patients so that reinjuries do not occur if patients RTW too soon.			
Time to return to work	Distribution of lost time claims by interval between injury and return to work: percent within 30 days, within 60 days, within 180 days, and within 18 months (cumulative percents).	This measure helps the MCO understand the patterns underlying cost and utilization outcomes that result from medical management.	Administrative
Lost time days	The total, average (mean) and median number of lost time days (days with wage replacement benefits paid) among all lost time claims.	This measure provides information on the effectiveness of medical management and care coordination, including coordination with employers.	Administrative
Total compensation days	Total compensation days is found for each lost time claim by adding up all wage replacement benefits paid and dividing by the temporary disability per diem rate for the claim.	This measure provides the MCO a more comprehensive measure of the relative success of return to work efforts by taking into account all forms of wage replacement benefit costs.	Administrative
Extended Rationale:			
As noted above, there are significant barriers to standardizing RTW measures of performance. These include variations in state calculations of lost time, problems with lack of data, and difficulty tracking initial and sustained RTW. However, since this is a critical outcome measure, URAC recommends that MCOs produce measures for internal assessment and quality improvement, with the ultimate objective of developing the data management and infrastructure necessary to produce consistent and standard measures of RTW. MCOs that look at trends in RTW and length of disability may be able to identify subsets of patients based on clinical course and duration of disability that may benefit from early intervention with care coordination and other assistance with RTW.			
Validity and Reliability Testing:			
These measures are commonly reported in the industry. Because of tracking RTW over time, and significant difficulty tracking workers with intermittent or seasonal employment, these measures are not validated for comparing performance across MCOs.			
Potential Case Mix Adjusters:			
Performance on RTW measures is affected by employer type, job type and worker characteristics. Case mix confounding can be addressed in part by reporting RTW outcomes by state, by industry, and by age, and sex.			

Work-related Outcomes – Administrative Data Measures: - continued

References:

1. Dasinger, LD, et. al. "Physicial workplace factors and RTW after compensated low back injury: a disability phase-specific analysis. J. Occup Environ Med. 2000 Mar; 42(3):323-33.
2. Hashemi, L. et. al. Length of disability and cost of workers' compensation low back pain claims. JOEM. 1997; 39(10) 937-944.
3. Krause N, et. al. Alternative approaches for measuring duration of work disability after low back injury based on administrative workers' compensation data. Am. J. Ind. Med. 35:604-618, 1999.

Health-related Outcomes – Health outcomes are of primary importance to an injured worker. Workers have a strong interest in knowing which MCOs practice medical management techniques that will maximize their health and well-being.

Measure Name	Description	Value of Measure to MCO	Data Source
Physical functioning post injury	The average score on the survey questions from the SF-12.	This is the standard post-injury functioning measure.	Patient Survey

Extended Rationale:

Physical functioning is a fundamental measure of health outcomes. It is a general measure of outcome that is not specifically tied to an injury or occupational illness. Employers, insurers and providers demand outcome information

Validity and Reliability Testing:

The SF-12, and its parent instrument, the SF-36 have been extensively tested in both this country and abroad. The SF-12 has validity and reliability for use with a variety of populations. It's specific use in an injured worker population or on this survey has not been tested fully.

Potential Case Mix Adjusters:

Subgroup analysis by injury type and worker attribution of functioning to injury or other. Correlation with age, gender and marital status.

References:

1. McHorney CA, Ware JE Jr., Lu JF, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36): III. Tests of data quality, scaling assumptions, and reliability across diverse patient groups. Medical Care, 32(1): 40-66
2. McHorney CA, Ware JE Jr., Rogers W, Raczek AE, Lu JF. The validity and relative precision of MOS short- and long-form health status scales and Dartmouth COOP charts. Results from the Medical Outcomes Study. Medical Care, 30(5 Suppl):MS253-65
3. SF-12® Health Survey, QualityMetric, Inc., Lincoln, Rhode Island
4. Stewart AL, Hays RD, Ware JE Jr. The MOS short-form general health survey. Reliability and validity in a patient population. Medical Care, 26(7):724-35
5. Ware J Jr., Kosinski M, Keller SD. A 12-Item Short-Form Health Survey: construction of scales and preliminary tests of reliability and validity. Medical Care, 34(3): 220-33

Patient Satisfaction – Patient satisfaction is an important outcome indicator that may be related to a more positive attitude among workers regarding RTW. It is also an indicator of the MCO's effectiveness at offering a network of acceptable providers and offering effective care coordination techniques.

Measure Name	Description	Value of Measure to MCO	Data Source
Satisfaction with the number of doctors to choose from	Worker rating of their overall satisfaction with the number of doctors to choose from	If satisfaction rates are low, the MCO may wish to expand their network.	Patient Survey
Satisfaction with MCO doctor seen most often	Worker rating of their overall satisfaction with the medical care they received from the doctor they saw most frequently.	If satisfaction rates are low, the MCO may expand the provider network, provide assistance to injured workers in seeking appropriate providers, or offer additional options for changing the treating provider.	Patient Survey
Changing doctors because dissatisfied	Percent of workers who report changing doctors at any time during their treatment because they were dissatisfied.	If change rates are high, the MCO may provide workers with increased assistance with initial provider referral. High risk cases for dissatisfaction may need early case management intervention to prevent doctor shopping.	Patient Survey
Satisfaction with pain management	Worker rating of their overall satisfaction with their pain management, among workers who report having pain.	If satisfaction rates are low, the MCO may implement a quality improvement initiative to ensure that providers are educated on pain management guidelines.	Patient Survey
Satisfaction with job modifications	Workers rating of their satisfaction with job modification and the proportion of those reporting that changes were needed but not made	If patients consistently report dissatisfaction with job modifications, the MCO may work with the employer to develop more effective worksite RTW programs, including programs for job modification.	Patient Survey
Satisfaction with medical services overall	Worker rating of their overall satisfaction with all the medical care they received for their injury.	Satisfaction may be related to many factors, including health status, functional outcomes, and coverage of work related injuries. The MCO may correlate responses to this question with information about provider choice, RTW and satisfaction with specific elements of care to "drill down" on factors that influence patient outcomes.	Patient Survey

Extended Rationale:

Satisfaction is a basic outcome measures. It represents an evaluation by the worker of the quality of services delivered, in light of the worker's expectations and perceived needs. Satisfaction measures are widely used in market research since a satisfied customer is likely to return for follow up services and comply with treatment regimens. Non-compliance may prolong disability and delay RTW. Although workers do not "choose" an MCO in the workers comp environment, their employer does. Employers should consider satisfaction in the context of other measures such as cost and utilization, to ensure that services are efficient and are acceptable to workers.

Patient Satisfaction - continued

Validity and Reliability Testing:

These are new and untested measures. In the workers' compensation setting specifically there is no evidence on the relationship between satisfaction and RTW.

Potential Case Mix Adjusters:

Satisfaction is usually correlated with age and perceived health status (Sixma et al). Older or healthier individuals are typically more satisfied with their health care. Conversely, younger or sicker individuals are less satisfied. Therefore, satisfaction should be reported by age and health status.

References:

1. Sixma HJ et al. Patient satisfaction with the general practioner. Medical Care 1998; 36(2): 212-229
2. CAHPS™ 2.0. Adult Core Questionnaire, October 1998

Prevention – MCOs are usually not required to carry out risk management at employer sites; they are responsible for medical management after an injury occurs. However, MCOs that ensure that their network providers address occupational injury prevention with injured workers may reduce costs and disability by preventing exacerbation and recurrence of injuries.

Measure Name	Description	Value of Measure to MCO	Data Source
Injury prevention counseling	Workers who agree or strongly agree that their doctor provided information on how to prevent recurrence of their injury.	Low prevention counseling rates may be an opportunity for MCOs to work with providers to improve their prevention counseling skills, or for the MCO to provide direct patient education on reinjury prevention.	Patient Survey

Extended Rationale:

Preventive care services may include primary prevention - elimination of a risk (often the employer's responsibility, secondary prevention – reduction of risk for other workers once an injury or illness has occurred, or tertiary prevention – reducing disability relating to an injury or illness. While MCOs are not accountable for primary prevention in most instances, it is reasonable to expect that they participate in tracking and reporting of injuries to facilitate risk reduction, and that providers address injury prevention and reduction of disability in the course of a clinical encounter.

Validity and Reliability Testing:

This is a new measure. It has not been tested.

Potential Case Mix Adjusters:

None – all survey respondents should report that they received prevention counseling.

References:

1. Cordes, DH, Rhea DF. Work site risk assessment. Prim Care. 1994; 21(2):267-74.
2. Dembe, AE, et. al. The role of prevention in workers' compensation managed care arrangements. Occup. Med. 1998. Oct-Dec; 13(4):663-77, iii. review
3. Dube, D., O'Donnell, J., Novak, D. Communication skills for preventive interventions. Academic Medicine. 2000; 75:S45-S54
4. Hashimoto, D. The future role of managed care and capitation in workers' compensation. Am J of Law and Medicine. 1996 Vol. XXII (2-3). 233-261.
5. McGrail, MP, et. al. A comprehensive initiative to manage the incidence and cost of occupational injury and illness. Report of an outcomes analysis. J. Occup Environ Med. 1995; 37(11):1263-8.
6. Merrill, RN, et. al. Illness and the workplace: a study of physicians and employers. J. Fam Pract. 1990; 31(1): 55-8.

Appropriate Clinical Care – Appropriate assessment, diagnosis and counseling at initial clinical visits is a critical factor in ensuring effective clinical management. The provider's recommendations for injury management and activity limitations have a significant impact on the recovery process, duration of injury and RTW. MCOs should ensure that their networks of providers document an effective process of initial clinical management to promote good patient outcomes.

Measure Name	Description	Value of Measure to MCO	Data Source
Adequate medical history	The number of workers with an adequate medical history, including history of trauma, documentation of specific conditions and nature of complaint.	These measures will help MCOs to identify training needs for providers in their networks to ensure that they carry out effective and appropriate occupational exams and work-related recommendations.	Medical Record
Occupational risk assessment	The number of workers with an occupational risk assessment, including a work history and a physician determination of work relatedness.		Medical Record
Appropriate focused physical exam	The number of workers with a focused physical exam, specific to the injury type.		Medical Record
Appropriate activity modification	The number of workers with appropriate activity modification specific to the injury.	MCOs can provide training to providers to ensure that they document best practices in promoting appropriate return to work.	Medical Record
Appropriate work restrictions	The number of workers with appropriate work modification specific to the injury type and employer notified.		Medical Record
Attempt to place on modified duty	The number of workers for whom the MCO contacted the employer to arrange modified duty, if indicated.		Medical Record
Appropriate patient education	The number of workers who received appropriate patient education, specific to the injury type.	MCOs can provide training to providers to ensure they carry out and document education that promotes the best outcomes.	Medical Record
Reassessment if injury unimproved	The number of workers receiving a repeat history and physical exam if the injury is unimproved or worsening.	MCOs can work with providers to ensure that they manage cases proactively.	Medical Record

Extended Rationale:

There is a severe lack of evidence on effective clinical practices for occupational injuries and associated work limitations. There is consensus, however, on the responsibility of the physician to in a workers' compensation encounter to determine work-relatedness and recommend appropriate work and activity limitations to foster recovery. An appropriate physical exam for an injury related to pain or strain will rule out "red flags" for more severe injuries. An occupational injury may be a sentinel event indicating that the worker's job put him/her at increased risk due to excessive weight or force requirements, awkward postures, safety or hazards. If the MCO recognizes this possibility and informs the employer, the employer can evaluate the worker's job in order to assess a preventable risk and correct it if it exists. Data from medical records should be evaluated in the context of information from the patient survey and administrative patterns of care data. This strategy helps to compensate from shortcoming of each data source when used for clinical analysis.

Appropriate Clinical Care – Medical Record Measures - continued

Validity and Reliability Testing:

These are new measures which have not been tested. Although there is some evidence that chart abstraction does not fully capture what occurred in a clinical encounter, chart review is considered the gold standard of documentation for clinical encounters. The proposed measures focus on elements of an appropriate diagnostic exam and clinical encounter. The chart review measures assess a very limited number of clinical interventions related to injuries, largely because there is little evidence on the timing, sequencing or content of clinical interventions for occupational injuries. Variations in patient presentation and co-morbidity presented insurmountable problems developing standardized measures for injury specific diagnostic testing and treatment, except for very limited interventions.

Potential Case Mix Adjusters:

The proposed measures are not affected by case mix. They may be affected if the injured worker was first seen in an emergency room, however, and the results of that encounter are not available to the MCO. The aspects of the encounter in URAC's measures are pertinent to all clinical encounters.

References:

General:

1. Franklin, G. et. al. Outcomes research in Washington State workers' compensation. Am J. of Industrial Medicine. 1996; 29:642-648.
2. Harris JS. Disability Management. In Harris JS (ed)*, Evaluation and Management of Common Health Problems and Functional Recovery in Workers: the ACOEM Occupational Medicine Practice Guidelines.* Beverly Farms, MA: OEM Health Information, 1997.
3. Harris, JS. Development, use, and evaluation of clinical practice guidelines. JOEM 1997; 39(1):23-34.
4. Hawker, et. al. Accuracy of administrative data for assessing outcomes after knee replacement surgery. J. Clin Epidemiology. 1997; 50(3); 265-273.
5. Lax, MG, Grant, WC, et. al. Recognizing occupational disease – taking an effective occupational history. Am Fam Physician. 1998; 58(4):935-44.
6. Luck J, Peabody JW, Dresselhaus TR, Lee M, Glassman P "How well does chart abstraction measure quality? A prospective comparison of standardized patients with the medical record" Am J Med 2000; 108: 642-649
7. Newton, K. et. al. The use of automated data to identify complications and co-morbidities of diabetes: a validation study. J. Clin Epidemiology. 1999; 52(3): 199-207.
8. Sparks, PJ et. al. Risk characterization, risk communication and risk management: the role of the occupational and environmental medicine physician. J Occup Med. 1993;35(1):13-17.
9. Wyman, DO. Evaluating patients for return to work. Am Fam Physician. 1999; 59(4): 844-8.

Low Back Pain/Strain

2. Andersson GB, Deyo RA. History and physical examination in patients with herniated lumbar discs. *Spine*. 1996;21(24 Suppl):10S-18S.
3. Bernard B. Musculoskeletal Disorders and Workplace Factors. A Critical Review of Epidemiologic Evidence for Work-related Musculoskeletal Disorders of the Neck, Upper Extremity, and Low Back. Cincinnati, OH: U.S. Department of Health and Human Services. Public Health Service. National Institute for Occupational Safety and Health; 1997.
4. Bigos S BO, Braen G, et al.,. Acute Low Back Problems in Adults. Clinical Practice Guideline No. 14. Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, U.S. Department of Health and Human Services.; 1994.
5. Cherkin, DC Primary care research on low back pain: the state of the science. Spine. 1998; 23(18):1997-2002.
6. Deyo RA RJ, Kent DL. What can the history and physical examination tell us about low back pain? *JAMA*. 1992;268(6):760-5.
7. Deyo, RA, et. al. Outcome measures for low back pain research. A proposal for standardized use. Spine. 1998; 23(18):2003-18.
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Wrist, Forearm and Hand Injury

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Shoulder Pain/Strain

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Appropriate Clinical Care – Patient Survey Measures Appropriate assessment, diagnosis and counseling at initial clinical visits is a critical factor in ensuring effective clinical management. The provider's recommendations for injury management and activity limitations have a significant impact on the recovery process, duration of injury and RTW. MCOs should ensure that their networks of providers document an effective process of initial clinical management to promote good patient outcomes.			
Doctor counsels worker about managing the injury	Workers who report that their doctor discussed what activities they could do, how to manage pain, different treatments, side effects of medications, and when they could return to work.	MCOs may offer supplemental training for network physicians in occupational medicine techniques.	Patient Survey
Doctor asks about job requirements	Workers who report that their doctor talked to them about their daily tasks and duties.	Understanding the constraints and demands on the worker helps the doctor plan the most effective treatment, thereby increasing the likelihood of successful return to work.	Patient Survey
Patient education about the injury given	Workers who report that their doctor discussed with them what to expect, different treatments, side effects of medications and treatments, and activity restrictions.	MCOs can provide training to providers to ensure they carry out education that promotes the best outcomes.	Patient Survey
Provider discusses return to work	Workers who report that their doctor discussed with them the date that they could return to work.	MCOs can work with providers to ensure they follow best practices to result in workers returning to work at an appropriate time.	Patient Survey
Extended Rationale:			
Many aspects of a clinical encounter are not documented in patient records or billing data. A survey of patient perceptions about the clinical encounter assesses the patient's understanding of what occurred during the encounter. Patient perception may predict outcomes as well as physician reported data on counseling re injury prevention and treatment and occupational advice. Ideally an MCO would be able to examine clinical trends using administrative data. There is significant evidence, however, that administrative data systems do not fully capture clinical information needed to assess the quality of clinical care. The patient survey provides additional information to interpret results from administrative data and chart review.			
Validity and Reliability Testing:			
These are new measures which have not been fully tested.			
Potential Case Mix Adjusters:			
Patient responses/recall may be affected by the length of time between the physician encounter and the survey. Patients may also have difficulty responding to questions specifically about a work-related encounter if they have had contact with multiple providers for work and non-work related problems. Survey validity may also be affected by non-response rates.			

Appropriate Clinical Care – Patient Survey Measures- continued

References:

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   Measuring the Performance of the Workers Compensation System, © Benjamin Amick III, Karen Roberts, Glenn Pransky, and Les Boden
3. SF-12® Health Survey, QualityMetric, Inc., Lincoln, Rhode Island
4. What Do Injured Workers Think of Their Medical Care? ©1998, California Division of Industrial Relations

Medical Cost - MCOs have a major influence on cost through the price and volume of services. Efficient MCOs will work with providers to ensure that they provide high quality and cost effective services. Cost measures should be evaluated in context with measure of patient satisfaction and return to work. It is essential to measure both medical and indemnity costs over time to evaluate the quality of the medical care and medical management provided to injured workers.

Measure Name	Description	Value of Measure to MCO	Data Source
Medical costs	Total, average (mean) and median medical cost, for all claims, and for claims disaggregated into Medical Only and Indemnity categories. These statistics are also to be reported for claims in four selected diagnosis groups, low back pain, knee sprain/strain, forearm/wrist/hand sprain/strain, and shoulder sprain/strain. URAC has defined these groups by diagnosis codes to ensure consistent comparisons among injured workers.	MCOs with high medical costs compared to benchmarks may wish to examine the causes of this higher cost to determine if they are appropriate given the MCO's population. MCOs should assess medical costs in relation to indemnity costs since they are interrelated.	Administrative
Temporary disability costs	Total, average (mean), and median temporary disability cost, for all claims with such costs. These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative
Permanent disability costs	Total, average (mean), and median permanent disability cost, for all claims with such costs. These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative
Other benefit costs	Total, average (mean), and median value of costs other than Medical, Temporary Disability and Permanent Disability, for all claims, and for claims disaggregated into Medical Only and Indemnity categories. These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative

Medical Cost – Continued			
Medical service costs	Cost statistics are to be reported for all claims, for medical services grouped into specified categories[1]. For each category, report: 1. Amount paid 2. Percent distribution of amount paid among categories 3. Amount paid per claim These statistics are also to be reported for claims in four selected diagnosis groups (defined below).		Administrative

Extended Rationale:

Workers' compensation benefit payments in the United States in 1996 were more than $42 billion, with employers' costs for the same period at just over $55 billion. Nationally, medical benefits were $16.8 billion, accounting for 41 percent of all payments. Total workers' compensation costs are the combination of medical and indemnity costs. In the late 1980's and early 1990's, workers' compensation medical costs were rising even faster than non-occupational medical costs, which were rising rapidly. A number of jurisdictions initiated medical cost containment legislation, including a myriad of managed care programs, comprehensive fee schedules and treatment parameters, for the most common and costly injuries occurring in workers' compensation. In order for such programs to contain medical, and ultimately, indemnity expenditures, it is necessary to control the number and type of service provided, as well as the cost of those services. Measures of test and service utilization are essential to a thorough understanding of the medical and indemnity systems in effect.

It is important to know if these managed care programs are working as promised. Are they able to deliver quality medical care for less cost than prior, fee-for-service arrangements? A decrease in medical costs alone will not prove successful in the long run, indemnity costs and disability durations must remain stable or improve, to show success.

Cost alone is an inadequate measure of success in workers' compensation, but is an extremely important system attribute. Differences in medical treatment or administrative treatment can account for dramatic differences in indemnity, or wage-replacement, experiences among injured workers. It is essential to measure both medical and indemnity costs over time to evaluate the quality of the medical care and medical management that is provided to injured workers.

Potential Case Mix Adjusters:

Cost measures can be affected by regional variations, by definition of medical, administrative, rehabilitation and indemnity cost categories. Actual cost is affected by utilization and co-morbidity. URAC's measures recommend reporting on cost by specific, homogeneous groups of injuries to control for variations due to co-morbidity. Costs should also be reported by state, using the cost mapping protocol developed for these measures.

[1] Visits and consults
Emergency services
Physical medicine
Psychiatric services
Other nonsurgical services
Musculoskeletal surgery
Neurosurgery
Other surgery and anesthesia
MRI/CT scans
Other radiology
Pharmacy
Inpatient room and board
Other facility charges
Medical-legal services
Special services and reports

Medical Cost – Continued

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Utilization – MCOs manage the volume of services provided to injured workers through the UM process. These measures help the MCO benchmark benchmark its performance to norms, and to detect possible under or over utilization.			
Measure name	**Description**	**Value of Measure to MCO**	**Data source**
Medical service utilization	Utilization statistics are to be reported for all claims, for medical services grouped into specified categories[2]. For each category, report: 1. Frequency (number of services provided) 2. Frequency per 1,000 claims These statistics are also to be reported for claims in four selected diagnosis groups (defined below).	Through chronological studies and comparison with other programs, these measures indicate areas in which improvement in efficiency may be possible.	Administrative
Treatment for workers with low back pain, sprain and strain	This is the first of four selected diagnosis groups, for which claims are to be selected on the basis of the diagnosis codes occurring in the provider billing data for each claim. Services in specified categories[3] are to be reported for the low back pain (LBP) group. For each category, report: 1. Percent of claims with the service within the first week after injury 2. Percent of claims with the service within the first four weeks after injury 3. Percent of claims with the service at any time within the interval covered by the data.	These measures help the MCO to examine utilization patterns of network providers in relation to other MCOs, and provide information on intensity of approaches to diagnosis and treatment in the period immediately after injury.	Administrative
Treatment for workers with pain, sprain and strain of the shoulder	Services in specified categories[4] are to be reported specifically for workers with diagnoses related to Shoulder injuries. The same statistics are to be reported for the Shoulder group as are defined above for the LBP group.	See comments above for LBP group.	Administrative

[2] Visits and consults; Emergency services; Physical medicine; Psychiatric services; Musculoskeletal surgery; Neurosurgery; Other surgery and anesthesia; MRI/CT scans; Pharmacy; Inpatient room and board; Other facility charges; Medical-legal services; Other nonsurgical services; Other radiology; Special services and reports

[3] Laminectomy of lower back; Arthrodesis of lower back; Injection; Other surgery of spine; Plain films of lower back; CT scan of lower back; MRI of lower back; Other radiology of spine; Physical medicine; Physical therapy modality; Chiropractic services; Hospital inpatient care; Other surgery; Other radiology; Emergency room

[4] Excision – shoulder; Injection – shoulder; Rotator cuff repair; Plain films – shoulder; CT scan – upper extremity; MRI – joint of upper extremity; Physical therapy modality; Chiropractic services; Hospital inpatient care; Other surgery; Physical medicine

Utilization – continued			
Measure name	**Description**	**Value of Measure to MCO**	**Data source**
Treatment for workers with pain, sprain and strain of the knee	Services in specified categories[5] are to be reported specifically for knee injuries. The same statistics are to be reported for the Knee group as are defined above for the LBP group.	See discussion above for the LBP group.	Administrative
Treatment for workers with pain, sprain and strain of the forearm, wrist, or hand	Services in specified categories[6] are to be reported specifically for Forearm, Wrist, Hand (FWH) injuries. The same statistics are to be reported for the FWH group as are defined above for the LBP group.	See discussion above for LBP group.	Administrative
Physical medicine encounters	Report the percent of claims that fall into each of the following ranges relative to number of physical medicine encounters: None, 1 – 5, 6 – 10, 11 – 15, 16 – 20, 21 or more These statistics are to be reported for each of the four diagnosis groups—LBP, Shoulder, Knee, FWH (defined above).	This measure provides a "drill down" of the distribution of the most common single form of treatment for injured workers of all types, and particularly for the four diagnosis groups defined here, allowing the MCO to look for possible over or underutilization.	Administrative
Radiology encounters	Reporting of radiology encounters will be similar to the measure defined above for physical medicine. In this case, the following frequency intervals will be used: None, One, Two, Three or more These statistics are to be calculated for each of the four diagnosis groups—LBP, Shoulder, Knee, FWH.	This measure permits the MCO to drill down on patterns of use for radiology, one of the most common services provided to injured workers, and one which is susceptible to over or under use.	Administrative

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Other shoulder repair	Other radiology	Emergency room	
[5] Diagnostic arthroscopy	Other surgery	Physical therapy modality	Complete meniscectomy
Arthroscopic surgery	Plain films – knee	Chiropractic services	Other excision of knee
Incision of knee	CT scan of lower extremity	Hospital inpatient care	Other radiology
Partial meniscectomy	MRI of joint of lower extremity	Emergency room	Physical medicine
[6] Carpal tunnel release	MRI of joint of upper extremity	Chiropractic services	CT scan of upper extremity
Injection therapy	Other radiology	Hospital inpatient care	Physical medicine
Other surgery	Nerve conduction study	Emergency room	Physical therapy modality
Plain film – forearm, wrist, hand			

Utilization – Continued **Extended Rationale:**
In order for MCOs to contain medical, and ultimately, indemnity expenditures, it is necessary to manage the number and type of service provided, as well as the cost of those services. Improvements in efficiency and quality can be achieved if resources are used at the right time, with the correct intensity, for valid indications. Utilization measures should be analyzed for indicators of either over utilization (which may increase disability and cost), or underutilization (which may also increase prolong disability and drive cost up in the long run.) Measures of test and service utilization are essential to a thorough understanding of the medical and indemnity systems in effect. Several of these service categories are especially relevant for diagnosis and treatment of low back pain, sprain, and strain, the most common form of injury among workers. The other categories are relevant for all types of injury. The general purpose of these measures is to indicate the extent to which providers under the aegis of the MCO are complying with the generally accepted principle that it is preferable to use conservative approaches to diagnosis and treatment in the period immediately after injury. Assessment of utilization is complicated by incomplete data systems and coding laxities that make it difficult to differentiate complex from uncomplicated illnesses.
Validity and Reliability Testing:
Utilization measures are widely used within the industry. Validity may be affected by completeness of data, and diagnosis and billing coding variations. Some of these variations may be controlled by URAC's mapping protocols, but other variations may affect the observed rates.
Potential Case Mix Adjusters:
Interpretation of utilization data is complicated by the presence of co-morbidities and legitimate patient preferences and provider practice variations. URAC's protocols for creating relatively homogenous groups of injuries eliminate some of the confounding variables. Utilization rates must be interpreted with the recognition that some variation is to be expected and accepted.

Utilization – Continued

References:

1. *1996 System Report, Section IV: Claim and Cost Trends*, Minnesota Department of Labor and Industry.
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Appendix 3
Definition of Diagnosis Groups

Overview

URAC created classifications of injuries that would be expected to have similar initial treatment patterns. These classifications are useful for creating more homogeneous groups of injuries for the purpose of analyzing cost, utilization, and treatment patterns. Performance measures derived from medical record audits should also be classified based on injury type defined here. The patient survey may use the classification system for sampling and analysis at the option of the MCO. This Appendix provides detailed specifications for identifying claims that belong in any one of the following four diagnosis groups:

1. Regional lower back pain, sprain and strain (Low Back Pain, or LBP).
2. Shoulder pain, sprain and strain (Shoulder).
3. Knee pain, sprain and strain (Knee).
4. Forearm, wrist and hand pain, sprain and strain (FWH).

The classification logic uses three lists of diagnosis codes:

- *Qualifying codes* that are defined for each of the four diagnosis groups. These codes determine whether a claim is eligible for inclusion in one of the groups.

- *Exclusion codes* that are generic for all four groups. A claim with one of these codes will be excluded from all groups, even if the claim also has a qualifying code.

- *Consistent codes* that are defined for each of the four diagnosis groups. These represent diagnoses that are consistent with the qualifying codes, but lack sufficient specificity to be qualifying codes.

The classification logic uses these three lists to place claims into one of the four groups (unless the claim has an exclusion code), and then to divide each of the four groups into two subgroups. We will refer to these as the "A" and "B" subgroups, which are defined as follows:

- Subgroup A—Claims that have only qualifying and consistent codes. This subgroup is the more homogeneous of the two subgroups from a medical perspective and thus more suitable for use with clinical guidelines. It may also be used for statistical analysis of patterns of treatment.

- Subgroup B—Claims that have codes other than those in the qualifying and consistent lists. This subgroup is less homogeneous than the "A" subgroup and thus less appropriate for use with clinical guidelines. With large enough sample sizes, however, it still may be used for statistical analyses.

Exhibit A3-1 represents this classification logic diagrammatically.

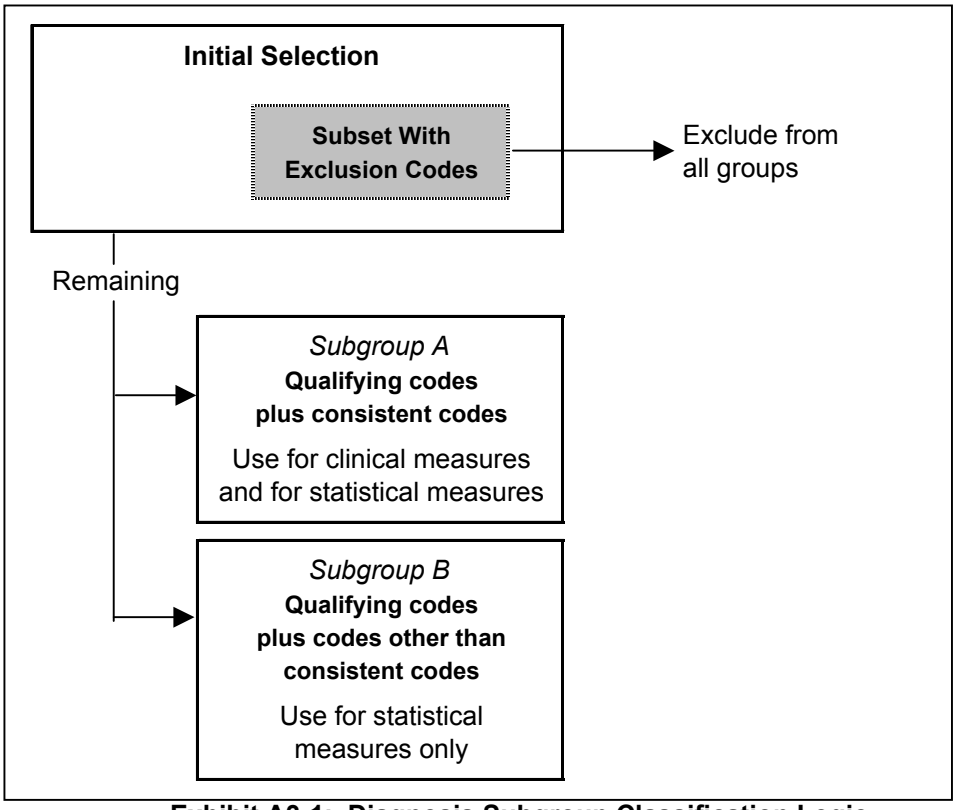


Exhibit A3-1: Diagnosis Subgroup Classification Logic

Data Source

The Provider Billing File is the intended data source for the classification. Each bill record in the file should contain one or more ICD-9[1] diagnosis codes. For a given claim there may be many bill records, with several different diagnosis codes. The classification logic considers all of the diagnosis codes for a claim, in order to decide which one, if any, of the four diagnosis groups the claim belongs to, and then which one of the two subgroups it belongs to.

The analysis should be limited to bills for services that were provided within the first 30 days of claim history. That is, the date of service for the bill should be less than or equal to the date of injury plus 30 days. (If the bill spans several dates of service, include the bill in the analysis if the "from" date of service—the earliest of the dates of service—is less than or equal to the date of injury plus 30 days.) The purpose for this rule is to avoid emergent medical conditions and approximate as closely as possible the initial medical problem(s) to which the care process was responding.

Diagnosis Codes

The following two categories of ICD-9 codes are not true diagnosis codes and should be excluded from the analysis altogether:

1. E-Codes—codes for external cause of injury that begin with the character "E."

[1] *International Classification of Diseases, 9th Revision, Clinical Modification*.

2. V-Codes—codes for "factors influencing health status and contact with health services" that begin with the character "V."

The classification logic uses all other diagnosis codes that occur for each claim among bills for services within the first 30 days.

Qualifying Diagnoses

As noted above, for each of the four diagnosis groups there is a list of *qualifying* diagnosis codes. A claim must have at least one of the codes on this list in order to be considered for a diagnosis group. For example, a claim that has a bill with diagnosis code 724.2, Lumbago, would qualify for the LBP group.

The qualifying code list for each group is presented below. The lists are mutually exclusive for the four diagnosis groups, so that a claim could not qualify for more than one of the groups.

Consistent Diagnoses

However, a claim that qualifies for a diagnosis group will still be excluded if it has any diagnosis code that is not consistent with the qualifying diagnosis codes. Each diagnosis group has a list of *consistent* diagnosis codes. The presence of any diagnosis code not on this list will cause the claim to be excluded.

For example, diagnosis code 724.6, Disorders of sacrum, is a consistent code for the LBP group. This code in itself is not sufficient to qualify a claim for the LBP group, but neither would this code cause a claim to be excluded from the LBP group.

Exclusion Diagnoses

There is an explicit list of exclusion diagnosis codes, to be applied relative to all four diagnosis groups. The presence of such a code for a claim will cause the claim to be excluded from all diagnosis groups. For example, a claim initially qualified for the LBP group might also have diagnosis code 805.4, Lumbar fracture. This would cause the claim to be excluded from the LBP group, and from the other three groups as well.

The exclusion codes are listed in Exhibit A3-2.

Note: In addition to excluding claims with one of the codes in this list, exclude all claims that have qualifying codes for two or more of the groups. For example, a claim with a code qualifying for the LBP group and another code qualifying for the Shoulder group should be excluded. Do *not* exclude claims that have two or more qualifying code for one group.

Code Range		
From	**To**	**Description**
279	279.09	Immunosuppression
344.6	344.61	Cauda Equina Syndrome
710	716.99	Arthropathies
717	717.9	Internal derangement of knee
718	718.99	Other derangement of joint
719	719.39	O&U disorders of joint
719.6	719.75	O&U disorders of joint
719.77	719.95	O&U disorders of joint
719.97	719.99	O&U disorders of joint
721.0	721.2	Cervical/thoracic spondylosis
721.4	721.42	Spondylosis with myelopathy
721.91	721.91	Spondylosis with myelopathy
722.7	722.73	Disc disorder with myelopathy
722.8	722.83	Postlaminectomy syndrome
724.0	724.09	Spinal stenosis
724.4	724.4	Lumbosacral neuritis NOS
727.00	727.01	Synovitis and tenosynovitis
727.03	727.03	Trigger finger
727.4	727.49	Ganglion, cyst of synovium
727.61	727.61	Rotator cuff rupture
727.8	727.89	Oth dis synovium, tend, bursa
729.2	729.2	Neuralgia/neuritis NOS
730	730.99	Osteomyelitis
731	731.8	Osteitis deformans
780.6	780.6	Fever
783.2	783.2	Abnormal loss of weight
800	829.1	Fractures
830	839.9	Dislocations
905	909.9	Late effects
922	924.9	Contusions
925	929.9	Crushing injury
950	957.9	Injury to nerves, spinal cord
996.4	996.4	Malfunct intern ortho device

Exhibit A3-2: Exclusion Codes

Next we define the qualifying and consistent codes for each of the four diagnosis groups.

Low Back Pain

Exhibit A3-3 lists the qualifying diagnosis codes for the LBP group. Any claim with one of these diagnosis codes is initially qualified for the LBP group.

Code	Description
307.89	Psychogenic backache
720.2	Sacroiliitis, NEC
721.3	Lumbosacral spondylosis without myelopathy
722.1	Displacement of thoracic or lumbar intervertebral disc without myelopathy
722.10	Displacement of lumbar intervertebral disc without myelopathy
722.2	Displacement of intervertebral disc, site unspecified, without myelopathy
724.2	Lumbago
724.3	Sciatica
724.5	Backache, unspecified
739.3	Nonallopathic lesions, lumbar region
739.4	Non allopathic lesions, sacral region
846	Sprains and strains of sacroiliac region
846.0	Lumbosacral sprains and strains
846.1	Sprains and strains of sacroiliac ligament
846.2	Sacrospinatus sprains and strains
846.3	Sacrotuberous sprains and strains
846.8	Sprains and strains, other specified sites of sacroiliac region
846.9	Sprains and strains, unspecified site of sacroiliac region
847.2	Sprains and strains, lumbar
847.3	Sprains and strains, sacral
847.4	Sprains and strains, coccyx

Exhibit A3-3: Qualifying Codes for LBP

Exhibit A3-4 lists the consistent diagnosis codes for the LBP group. If a claim initially qualified for the LBP group also has one of these codes, the presence of that code should not cause the claim to be excluded from the group.

Code	Description
720.1	Spinal enthesopathy
720.9	Unspecified inflammatory spondylopathy
721.5	Unique or unusual forms spondylosis
721.6	Ankylosing vertebral hyperostosis
721.7	Traumatic spondylopathy
721.8	Other allied disorders of spine
721.90	Spondylosis unspecified site without myelopathy
722.30	Schmorl's nodes, unspecified region
722.32	Lumbar Schmorl's nodes
722.51	Degeneration thoracic or thoracolumbar disc
722.52	Degeneration lumbar or lumbosacral disc
722.6	Degeneration disc, site unspecified
722.90	Other and unspecified disc disorder, site unspecified
722.93	Other and unspecified lumbar disc disorder
724.40	Thoracic or lumbosacral neuritis or radiculitis, unspecified
724.6	Disorders of sacrum
724.8	Other symptoms referable to back
724.9	Other unspecified back disorders
737.10	Kyphosis (acquired) (postural)
737.20	Lordosis (acquired) (postural)
737.30	Scoliosis [and kyphoscoliosis], idiopathic
738.4	Acquired spondylolisthesis
738.5	Other acquired deformity of back or spine
739.2	Nonallopathic lesions, thoracic/thoracolumbar region
756.10	Anomaly of spine, unspecified
756.11	Spondylosis, lumbosacral region
756.12	Spondylolisthesis
756.13-19	Various congenital anomalies
847.9	Sprains and strains, unspecified

Exhibit A3-4: Consistent Codes for LBP

A claim qualifying for the LBP group that has no code other than one of these consistent codes should be placed in the LBP "A" subgroup. If an LBP claim does have another code it should be placed in the LBP "B" subgroup.

Shoulder

Exhibit A3-5 lists the qualifying codes for the Shoulder group.

Code	Description
719.41	Pain in shoulder joint
719.51	Stiffness in shoulder joint
726.0	Adhesive capsulitis of shoulder
726.1	Rotator cuff syndrome of shoulder and allied disorders
726.10	Disorders of bursa and tendons in shoulder, unspecified
726.11	Calcifying tendinitis of shoulder
726.12	Bicipital tenosynovitis
726.19	Other specified disorders of shoulder
726.2	Other affections of shoulder region, NEC
840	Sprains and strains of shoulder and upper arm
840.0	Acromioclavicular
840.1	Coracoclaivular
840.2	Coracohumeral
840.3	Infraspinatus
840.4	Rotator cuff
840.5	Subscapularis
840.6	Supraspinatus
840.8	Other specified sites of shoulder and upper arm
840.9	Unspecified sites of shoulder and upper arm

Exhibit A3-5: Qualifying Codes for the Shoulder Group

The Shoulder group does not have a consistent code list. Thus, a Shoulder claim with only codes in the above list belongs in subgroup "A." All other Shoulder claims should be placed in subgroup "B."

Knee

Exhibit A3-6 lists the qualifying diagnosis codes for the Knee group.

Exhibit A3-6: Qualifying Codes for the Knee Group

Code	Description
719.46	Pain in joint, lower leg
726.6	Enthesopathy of knee
726.60	Enthesopathy of knee, unspecified
726.61	Pes anserinus tendinitis or bursitis
726.62	Tibial collateral ligament bursitis
726.63	Fibular collateral ligament bursitis
726.64	Patellar tendinitis
726.65	Prepatellar bursitis
726.69	Other enthesopathy of knee
844.0	Sprain/strain, lateral collateral ligament
844.1	Sprain/strain, medial collateral ligament
844.2	Cruciate ligament sprain/strain
844.3	Sprains and strains of tibiofibular ligament of knee
844.8	Sprain of knee and leg, not elsewhere classified
844.9	Sprain of knee and leg, not otherwise specified

Exhibit A3-7 lists the consistent diagnosis codes for the Knee group.

719.56	Stiffness of joint, lower leg
719.76	Difficulty in walking, lower leg
719.96	Unspecified joint disorder, lower leg
727.09	Other synovitis and tenosynovitis
727.2	Specific bursitides often of occupational origin
959.7	Other and unspecified injury to knee, ankle and foot

Exhibit A3-7: Consistent Codes for the Knee Group

Forearm/Wrist/Hand

Exhibit A3-8 lists the qualifying diagnosis codes for the Forearm/Wrist/Hand group.

Exhibit A3-8: Qualifying Codes for the Forearm/Wrist/Hand Group

Code	Description
354.0	Carpal tunnel syndrome
719.43	Pain in the forearm
719.44	Pain in the hand
719.53	Stiffness of the forearm
719.54	Stiffness of the hand
726.4	Enthesopathy of wrist and carpus
727.04	Radial styloid tenosynovitis
727.05	Other tenosynovitis of hand and wrist
841.0	Sprains and strains of radial collateral ligament
841.1	Sprains and strains of ulnar collateral ligament
841.9	Sprains and strains of unspecified site of elbow and forearm
842	Sprains and strains of wrist and hand (also include all subdivisions: 842.0, 842.00, 842.01, etc.)

There is only one consistent diagnosis code for the Forearm/Wrist/Hand group:

727.2 Specific bursidities of occupational origin

Data Processing Approach

The most efficient way to apply this classification logic in practice will depend on data structures and software available at the site of application. The following is offered as one approach, for the convenience of those who wish to use this classification, and also to clarify further the classification logic itself.

1. Create a Diagnosis Group Reference File

   - Combine the diagnosis code lists given above into one file, which we will label the Diagnosis Group Reference File.

- For each code, create a record with three fields:

    1. Diagnosis code

    2. Diagnosis group identifier. For the qualifying and consistent codes this would be one of the following: LBP, Shoulder, Knee, FWH (or some similar abbreviations). For the exclusion codes, which apply to all groups, use "Exc."

    3. Code indicating whether diagnosis is qualifying (Q), consistent (C) or exclusion (X).

2. From Provider Billing File, create a Claim/Diagnosis File, with a record for each combination of claim ID number and diagnosis code

    - Use only bill records with date of service (or "from" date of service) less than or equal to the claim's date of injury plus 30 days.

    - Omit V-codes and E-codes.

3. Create a Qualified Claims File.

    - Pass the Claim/Diagnosis File against the Diagnosis Group Reference File.

    - Identify claims with an exclusion diagnosis code and omit these claims from the subsequent steps.

    - Identify claims with a qualifying diagnosis for any one of the four groups.

    - Write a record for each such qualifying claim, containing the claim ID number and the diagnosis group identifier. These records will constitute the Qualified Claims File. Since the four qualifying code lists represent disjoint sets (no code is on two or more lists) there will be one and only one group code for each claim.

4. Identify claims as belonging to either subgroup "A" or subgroup "B."

    - Compare the Diagnosis Group Reference File (to find the consistent codes for each group), the Claim/Diagnosis File (which has all diagnosis codes for each claim) and the Qualified Claims File (which has the diagnosis group for each claim).

    - Identify claims with a diagnosis code that is neither a qualifying code nor a consistent code. In the Qualified Claims File, mark these claims as belonging to subgroup "B."

    - In the Qualified Claims File, all claims not identified as belonging in subgroup "B" should be marked as belonging in subgroup "A."

After Step 4 the Qualified Claims File will contain records for those claims, and only those claims, that belong to one of the four diagnosis groups. The file will contain the diagnosis group identifier for each claim and the subgroup identifier. The Qualified Claims File can then be used to classify records in the provider billing database itself.

SURVEY OF WORKER EXPERIENCE WITH

WORK-RELATED INJURIES

URAC Workers' Compensation Performance Measurement Initiative

(Note to users – prior to implementing this survey, insert dates of the MCO's case finding period. In addition, remove the coding numbers assigned to each survey response value. These codes are for use in data entry.)

SURVEY OF WORKER EXPERIENCE WITH WORK-RELATED INJURIES

INSTRUCTIONS

This is a **completely private and confidential** survey. **You do not have to answer this survey.**

We want to learn about the medical care you received for your work-related injury. Your personal information and responses will not be shared with anyone and cannot be linked to your worker's compensation claim. Data will be reported *only* as summaries and you will never be identified. Your answers *will not* be reported to your employer.

We are asking you to take a few minutes to fill out this survey as soon as possible.

- Please try to answer every question (except those we ask you to skip). If you can't remember or aren't sure, do the best you can.
- Most questions can be answered by checking a box or by writing in a word or phrase. Never check more than one box UNLESS the INSTRUCTIONS SAY TO *"CHECK ALL THAT APPLY"*
- Please read all directions carefully – Especially the instructions that are big, like this
- You may notice a number on the cover of the survey. This number is ONLY used to let us know if you returned your survey so we don't have to send you reminders.

Some of the questions use the phrase "your work-related injury". "Your work-related injury" is the work-related health care problem you received care for between xxxxx and xxxxx.

If you did not receive medical care for any work-related injury between [MCO insert date] and [MCO insert date], please check the box at the right. Do not answer any more questions. Return the questionnaire in the enclosed self-addressed, stamped envelope.	☐

A. Your Work-Related Injury

IMPORTANT**: If you had more than one work-related injury between [MCO insert date] and [MCO insert date], please choose the injury of most concern to you and answer all questions while thinking about that injury.**

A1. What was your work-related injury? **Check ONE.**

a.	Scrape, cut, skin rash, bruise, swelling, or inflammation	☐(1)
b.	Sprain, strain or other injury of a muscle or joint	☐(2)
c.	Repetitive stress injury due to repeated motions	☐(3)
d.	Fracture (broken bone)	☐(4)
e.	Burn	☐(5)
f.	Emotional or mental stress	☐(6)
g.	Other (Please describe fully)	☐(7)

A2. What **part** of your body was injured? **Check ONE.**

a.	Back	☐(1)
b.	Knee	☐(2)
c.	Shoulder	☐(3)
d.	Wrist, hand or forearm	☐(3)
e.	Eye	☐(5)
f.	Head or face	☐(6)
g.	Other part of your body (Please describe fully)	☐(7)

B. Your Medical Care

B1. Who **chose** the first doctor you saw?

☐(1)	☐(2)	☐(3)	☐(4)
I did	**My employer**	**An insurance company**	**Someone else**

B2. For your work-related injury, how much of a problem, if any, was it to get:

		A big problem	A small problem	Not a problem
a.	A doctor or other medical provider you were happy with?	☐(1)	☐(2)	☐(3)
b.	A referral to a specialist that you needed to see?	☐(1)	☐(2)	☐(3)
c.	Care you OR a doctor believed was necessary?	☐(1)	☐(2)	☐(3)

B3. How long did you have to wait between first trying to get care and actually seeing a provider for your work-related injury?

☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(6)	☐(7)	☐(9)
Same day	**1 day**	**2 days**	**3 days**	**4-7 days**	**8-14 days**	**15 or more days**	**I didn't need care right away**

B4. How satisfied were you with the **number** of doctors or health care professionals you could choose from?

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Not at all satisfied									**Completely satisfied**

B5. What kind of health care professional gave you most of the health care you received for your injury?

- ☐(1) Medical Doctor (MD)
- ☐(2) Osteopathic Doctor (DO)
- ☐(3) Chiropractor
- ☐(4) Nurse Practitioner or Physician Assistant
- ☐(5) Physical therapist
- ☐(6) Hospital emergency room
- ☐(8) Other type of health care professional (Please describe in the space below)

- ☐(9) Don't know what kind of health care professional he/she was

The next questions ask about the doctor or other health care professional you saw most often for your work-related injury. Answer all the questions while thinking about that person.

B6. The doctor or other health care professional I saw **most often** for my work-related injury:

		Never	Sometimes	Usually	Always	Don't know
a.	Took my medical condition **seriously**	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
b.	Treated me with **respect**	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
c.	**Listened** carefully to me	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
d.	**Explained things** in a way I could understand	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)

B7. The doctor or health care professional I **saw most often** for my work-related injury talked to me about:

		Not at all	Very little	Some	A lot	Did not apply to my injury
a.	**My daily job** tasks and duties	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
b.	**What to expect** from my injury (for example, what to expect about pain or recovery time)	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
c.	**Different treatments** for my work-related injury	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
d.	**Side effects of medications** or other treatments prescribed for my work-related injury	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
e.	**Activities** I should avoid and activities I could do while injured	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
f.	The **date** I could **return to work**	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
g.	**Changes to my work** such as reduced hours, or changed work layout or equipment	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)
h.	Ways to **prevent** getting injured again	☐(1)	☐(2)	☐(3)	☐(4)	☐(9)

B8. How much did the **doctors** and other health care professional you saw **involve you in decisions** about going back to work?

☐(4) **A lot** ☐(3) **Some** ☐(2) **Very little** ☐(1) **Not at all** ☐(9) **Did not apply to my injury**

B9. How helpful were the doctors and other health care professionals in dealing with your **injury-related pain?**

☐(4) **Very helpful** ☐(3) **Somewhat helpful** ☐(2) **Not too helpful** ☐(1) **Not at all helpful**

B10. How **satisfied** were you with the doctor or other health care professional you **saw most often**? **Check one**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Not at all satisfied **Completely satisfied**

B11. At any time during the treatment for your injury, did you **change** doctors because you were dissatisfied?

☐(1) **Yes** ☐(0) **No**

Now think about ALL the medical care you received.

B12. How satisfied were you with **ALL the medical care** you received for your injury**?**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Not at all satisfied **Completely satisfied**

C. YOUR WORK

C1 Which best describes your work status **now? (CHECK ONE)**

☐(1) Not working because of my injury

☐(2) Not working for another reason

☐(3) Working

C2. **BEFORE** you were injured, how **satisfied** were you with your job as a whole, taking everything into consideration?

☐(4) **Very satisfied** ☐(3) **Satisfied** ☐(2) **Dissatisfied** ☐(1) **Very dissatisfied**

C3. Have you returned to work, even for a few days, since your work-related injury?

☐(1) **Yes** ➡ **GO TO QUESTION C4**

☐(0) **No** ➡ **GO TO QUESTION D1**

☐(9) **I never missed any time from work because of my injury** ➡ **GO TO QUESTION C11**

The next questions are about time missed from work since your injury.

If you did not miss any time from work GO TO C11

C4. About how many working days did you miss from work after your injury until you **first** went back to work (not counting time missed for medical appointments)?

Days **(write in number)**

_____

C5. How did you feel about the timing of when you first went back to work? Would you say you went back to work:

☐(1)	☐(2)	☐(3)
Too soon	**At about the right time**	**Could have gone back earlier**

C6. How helpful was your **employer** in helping you to return to work?

☐(4)	☐(3)	☐(2)	☐(1)	☐(9)
Very helpful	**Somewhat helpful**	**Not too helpful**	**Not at all helpful**	**Don't know if my employer was helpful**

C7. **WHEN** you went back to work, was your job, work environment, or hours changed in any way (that is, were you on modified or light duty)?

☐(1)	☐(0)	☐(9)	
Yes	**No**	**Not needed for my injury**	**If NO OR NOT NEEDED, GO TO QUESTION C9**

C8. Were you satisfied with your job modifications?

☐(4)	☐(3)	☐(2)	☐(1)	☐(0)	☐(9)
Yes, very satisfied	**Somewhat satisfied**	**Somewhat dissatisfied**	**Very dissatisfied**	**Changes needed but not made**	**No changes needed**

C9. **AFTER** you first went back to work, did you miss any **additional** days from work – not counting time missed for medical appointments?

☐(1) **Yes**

☐(0) **No** ➡ **GO TO QUESTION C11**

C10. About how many **additional** working days did you miss from work?

days

_____

The next question is about your most recent work

This question asks you to rate the amount of time during the **past four weeks that you worked** that you had difficulty handling certain parts of your job.

C11. In the **past 4 weeks that you worked**, how much of the time did your physical health or emotional problems make it **difficult** for you to do the following**:**

Difficult	**All of the Time (100%)**	**Most of the Time**	**Half of the Time (About 50%)**	**Some of the Time**	**None of the Time (0%)**	**Does Not Apply to My Job**
a. Stick to a routine or schedule	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
b. Feel a sense of accomplishment	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
c. Work fast enough	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
d. Finish work on time	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
e. Do your work without making mistakes	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
f. Concentrate on your work	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
g. Speak with people in-person, in meetings or on the phone.	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
h. Lift, carry, or move objects at work weighing more than 10 lbs.	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
i. Sit, stand, or stay in one position for longer than 15 minutes while working	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
j. Bend, twist, or reach while working	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
k. Do your work without stopping to take extra breaks or rests	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
l. Walk or move around different work locations, for example, to go to a meeting	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)
m. Use hand-held tools or equipment (for example, a phone, pen, keyboard, computer mouse, drill, hairdryer, or sander)	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(9)

D. Your Health in General

D1. In general, would you say your health is**…. (Mark one box).**

☐(5)	☐(4)	☐(3)	☐(2)	☐(1)
Excellent	**Very good**	**Good**	**Fair**	**Poor**

The following items are about activities you might do during a typical day**.**

D2. Does your health **now** limit you in these activities? If so, how much?

		Yes, limited a lot	Yes, limited a little	No, not limited at all
a.	**Moderate activities** such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	☐(1)	☐(2)	☐(3)
b.	Climbing **several** flights of stairs	☐(1)	☐(2)	☐(3)

During the past 4 weeks

D3. Have you had any of the following problems with your work or other regular daily activities because of your **physical** health?

		Yes	No
a.	Accomplished less than you would like	☐(1)	☐(0)
b.	Were limited in the kind of work or other activities that you could do.	☐(1)	☐(0)

D4. Have you had any of the following problems with your work or other regular daily activities because of any **emotional problems** (such feeling depressed or anxious)?

		Yes	No
a.	Accomplished less than you would like	☐(1)	☐(0)
b.	Didn't do work or other activities as carefully as usual?	☐(1)	☐(0)

D5. In the past 4 weeks, how much did **pain interfere** with your normal work (including both work outside the home and housework)?

☐(1)	☐(2)	☐(3)	☐(4)	☐(5)
Not at all	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**

D6. These next questions ask about how you feel and how things have been with you during the **past 4 weeks**. For each question, please give the one answer that comes closest to the way **you have been feeling?** How much of the time during the **past 4 weeks**….

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
a. Have you felt **calm and peaceful?**	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(6)
b. Did you have a lot of **energy**?	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(6)
c. Have you felt **downhearted** and **blue**?	☐(1)	☐(2)	☐(3)	☐(4)	☐(5)	☐(6)

D7. During the past 4 weeks, how much of the time has your <u>physical health or emotional problems</u> interfered with your **social activities** (like visiting with friends, relatives, etc.)?

☐(1)	☐(2)	☐(3)	☐(4)	☐(5)
All of the time	Most of the time	Some of the time	A little of the time	None of the time

D8. If you are **NOW limited in physical or social activities** by your physical health or emotional problems, is it because of your work-related injury?

☐(1)	☐(2)	☐(3)	☐(9)
Because of my injury	Because of some other reason	Both because of my injury and another reason	I am not limited in activities

E. BACKGROUND

The last set of questions provides important background information. Please remember that the information you provide is completely private and confidential.

E1. What is your birthdate? (Fill In) __ __ / __ __ / __ __ __ __
MONTH DAY YEAR

E2. Are you? (Mark one box.)

☐(1) **Male** ☐(2) **Female**

E3. Did you have health insurance at the time of your injury?

☐(1) **Yes** ☐(0) **No**

E4. What is your current marital status?

☐(1)	☐(2)	☐(3)	☐(4)
Single, never married	Married or living with a partner	Separated or divorced	Widowed

E5. What is the highest level of schooling you have completed? (Mark one box.)

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17 or more
Grade School								**High School**				**College**				**Post Graduate**

E6. What is your <u>main</u> racial group? **Check only one box.**

☐(1)	☐(2)	☐(3)	☐(4)	☐(5)
White/ Caucasian	Black/ African American	American Indian/Alaska Native	Asian	Other

E7. Are you Spanish/Hispanic/Latino?

☐(1) Yes ☐(0) No

E8. Did you hire a lawyer to represent you for this claim?

☐(1) Yes ☐(0) No

E9. What is today's date?

___ ___ / ___ ___ / ___ ___ ___ ___

Month/ Day / Year

Thank you for completing this survey! Please mail it back to us in the enclosed, stamped envelope now.

Appendix 4.1.1
Survey Implementation Procedures

This Appendix includes the following:

- A brief discussion of the mechanics of conducting a survey
- Suggestions for drawing a sample
- Examples of protocols for conducting both mailed and telephone surveys
- URAC recommendations for administering the survey on a test basis
- Sample reports from the survey

The material presented here does not constitute a complete "how-to" manual. Excellent and detailed discussions of how to plan and manage a survey may be found elsewhere.[1]

The URAC survey

The URAC Workers Compensation survey provides Workers Compensation MCOs with information about the quality of care they deliver. This information is intended to help the MCO identify opportunities for improving the care delivered to injured workers. The dimensions of care assessed by the survey include: access, communication, outcomes, coordination of services, prevention of injuries and satisfaction.

Overview of conducting a survey

Conducting a survey involves several steps. The basic steps include: planning and organizing the survey, drawing a sample, collecting the data, and analyzing and reporting the data. While an MCO may choose to contract with a survey vendor for many of the survey functions, they will always need to have an in-house person or persons responsible for the overall management and direction of the project.

Functions of the planning and organizing phase of a survey include

- **Developing a project team –** Confirming/identifying the goals and objectives of the survey, selecting a project leader to oversee the project, appointing one or two team members to help move the project forward, identifying a sponsor within the MCO to make sure the team has support and resources for managing and reporting the results of the survey.

- **Preparing a budget and timeline –** Setting the initial parameters for the survey project in terms of financial resources available/required, as well as the time frame for conducting the project.

- **Determining the need for worker consent and confidentiality -** Some organizations require approval of an Institutional Review Board (IRB) before

[1] For more detail, see the CAHPS Implementation Manual, Washington, DC: AHCPR, 1998. Or McGee J et al. Collecting Information from Health Care Consumers. Gaithersburg, MD: Aspen, 1997.

conducting research or surveys on human subjects. You should determine whether this is necessary in your state or organization. Usually projects conducted for quality improvement purposes are not subject to IRB approval, as long as the organization takes steps to protect confidentiality of individual workers. Use of an external vendor helps to ensure confidentiality of individual worker responses to the URAC survey. Confidentiality issues may also determine whether you analyze data for all workers combined, or in separate, injury specific subgroups.

- **Selecting the survey method** - Choosing between mailed versus telephone administration of the survey. The decision may hinge on the trade-off between resources and desired response rate, as well as on the availability of accurate telephone numbers for the target population. Telephone surveys often have a higher response rate but typically cost more than a mailed survey. On the other hand, thorough follow-up of a mailed survey may yield up to a 70% response rate. Both mail and telephone survey response rates may be affected by language barriers and poor contact information for injured workers.

A key decision, which must be made early in the process, is whether to use a survey vendor for part or all of the process of drawing the sample, collecting and analyzing the data. There are substantial advantages to using a survey vendor and **URAC recommends that the MCO use a survey vendor**. One source of information about survey vendors is the NCQA web site www.ncqa.org.

Using a survey vendor typically involves:

- Preparing a statement of work for the vendor, a Request for Proposal (RFP). The RFP should be specific about the scope of work and tasks. You may wish to set specific performance goals for response rates to be achieved. You will need to agree upon methods and frequency for following up with non-respondents, including phone calls, letters or reminder postcards.

- Giving vendors copies of relevant materials such as the questionnaire, project goals and objectives, report formats

- Asking for references from projects similar to your own and talking to the other groups. It is particularly helpful to select a vendor with experience working with injured workers. This population may be more difficult to survey due to language barriers and difficulty making contact.

- Specifying what raw data and reports are required by the MCO.

You will need to be able to provide the survey vendor with an electronic data file containing names of all individuals eligible for the sample. This large file is called a sample frame. The vendor will draw the sample from the sample frame. This protects confidentiality of the injured workers since the MCO does not know which workers from among those eligible.

Drawing a sample

The appropriate sampling strategy for an MCO depends on whether the ultimate goal is to::

- **Goal 1:** Measure MCO performance overall on the dimensions of workers' compensation care that are covered by the survey

- **Goal 2:** Measure MCO performance by specific injury group – low back pain, knee, shoulder and arm/wrist/hand injuries – in addition to their overall performance

This document describes how to develop a sampling frame which is appropriate for either goal and presents a sampling strategy which is appropriate for Goal 1. For Goal 1, the strategy involves taking a random sample from all injured workers seen at least once by an MCO provider, with a date of injury within a specified time period. The sampling strategy for Goal 2 uses a stratified random sample drawn from five injury groups: the four groups mentioned above, plus a group representing all other injured workers. To implement the second strategy the reader should consult a sampling expert and/or one of many texts on the subject.[2]

Sampling, at its most basic, is a two-step process:

- creating a list of target population members (also known as the sampling frame)
- sampling from the target population.

Identifying the target population for the survey

The target population for the survey is the group to whom the survey applies. The sampling frame is simply a list of the members of the target population from which the sample is drawn. This survey uses a sampling frame of workers injured within a defined time period (also known as the case finding period), who have had at least one visit to the MCO, with the first visit occurring within the first 4 weeks after the date of injury. Each worker's injury is assigned to one of five groups: low back pain, knee injury, shoulder injury, forearm/wrist/hand injury or other injury.

Consideration for national MCOs. National MCOs with sites in several states should develop separate sampling frames for selected states. Regional sampling frames within a state may also be appropriate, depending on the MCOs presence in the market and survey goals.

Data Considerations. All MCOs will need to format and clean data files to provide to the survey vendor. MCOs should work with the vendor to determine the file format needed, and to determine how fields must be delineated. If the MCO is not able to produce some information (e.g. worker date of birth), it is still possible to conduct the survey. Other missing data may make it impossible to carry out the survey as developed (e.g. missing worker name, address, or date of injury.) In this instance, the MCO should work with the insurance carrier or TPA to obtain a valid sample using URAC's protocols. If possible, the MCO should verify information that may be out of date with the carrier prior to providing it to the vendor. The

[2] References include: Henry GT. Practical Sampling. Newbury Park: Sage Publications, 1990. or Kalton G. Introduction to Survey Sampling. Newbury Park: Sage Publications, 1983.

vendor should have the capability to use US postal service software to update mailing addresses for which there is a forwarding order.

Table 1 shows the criteria for creating the sampling frame for the survey.

Table 1: Criteria for creating the sampling frame for the sample

Case finding period:	July 1, 1999 through December 31, 1999 (or subsequent years in same format, depending on when the survey is administered)
Index event:	Date of Injury (DOI) during the case finding period
Inclusion criteria:	• At least one paid medical claim, with or without paid indemnity benefits • At least one visit to the MCO on or after the index event (DOI) • First visit to MCO less than or equal to 4 weeks after the date of injury • Age at DOI greater than or equal to age 18 and less than age 65
Exclusion criteria	• Exclude claims opened without benefit payment – indemnity, medical or other
Optional	• URAC believes it is helpful to have the ability to analyze survey responses by injury type. For MCOs that are able to access diagnosis codes, the following step should also be taken. Surveys should be marked with a numerical code indicating the injury type.
Injury flag	• Each worker's injury should be assigned to one of five groups, using the procedure and codes from Appendix 3. The groups are: ◦ Low back pain ◦ Shoulder injury ◦ Knee injury ◦ Forearm/Wrist/Hand injury ◦ All other injury

The case finding period for this survey is limited to six months to maximize the likelihood of recall of salient events and experiences. We understand that the sampling frame will contain a mix of injuries of different ages which may slightly affect satisfaction, recall and functional outcomes data. However, the advantages of a simple case finding period outweigh the benefits of the more difficult to implement rolling survey administration. The complete procedure for preparing the sampling frame follows in this document.

The inclusion criteria are aimed at finding workers who use the MCOs services soon after the injury to maximize recall of the link between the injury and the MCO services. Using this

sampling frame may exclude certain cumulative injuries, depending on the date of injury reported by the claimant. The injury flag is essential for creating the stratified sample required for Goal 2 and is also useful during the analysis phase of Goal 1.

Deciding the sample size

The size of the completed survey sample depends on:

- the number of workers in the target population/sampling frame
- the desired "margin of error" and
- the expected response rate.

These terms may be explained as follows:

- **ASSUME** the MCO wishes to know the proportion of injured workers who report that the MCO doctor involved them in decisions about going back to work

- **MARGIN OF ERROR** represents the confidence in the collected data. Margin of error is the plus or minus figure that is often attached to survey results. For example, if 30% of workers say that their doctor involved them in decisions about going back to work, plus or minus 7%, that means that if the survey were repeated on a different sample of workers from the population, the results for the same question would be between 23% and 37%. If the margin of error were 13% then the range would be 17% to 43% - a range of over 25 percentage points. The larger the margin of error, the less certain the interpretation of the results of the survey will be.

- **RESPONSE RATE** is the percentage of workers surveyed who actually responded to the questionnaire. The expected response rate is used to inflate the number of cases sampled to account for the anticipated non-response. The number of cases sampled should always be larger than the desired number of completed surveys. A low response rate is of concern because the MCO does not know why injured workers did not respond. Non-respondents could vary significantly in their perceptions or their outcomes from respondents. If possible, the MCO should compare respondents to information they have about the population in general (age, sex, education level).

Let's assume a 10% margin of error is acceptable and the target population size is 700 workers. A final number of 85 completed surveys would give the MCO the desired precision of plus or minus 10%. Plus or minus 10% may be much too large (a range of 20 points) if the MCO's goal is to precisely measure performance. On the other hand, ± 10% may be acceptable for identifying opportunities for quality improvement. Smaller numbers of completed surveys are associated with less precise estimates. Increasing the number of completed surveys improves the precision of the survey.

To determine the sample size, one more step is required. If the MCO samples and contacts only 85 workers, fewer than 85 completed questionnaires will be received. This is because not every worker will choose to participate in the survey. If the MCO expects that about 40% of the workers who are asked to participate will ultimately choose to complete the survey, then a sample of 212 workers should be drawn to achieve an effective sample size of 85 completed surveys. The desired number of completed surveys should be divided by the expected response rate to produce the number of workers sampled.

Sampling, then, involves of making a series of decisions. There is no single "correct" sample size. It depends on the goals and objectives of the survey as well as upon the MCO's desire for precision For the URAC survey, the **recommendation** is to sample cases based on the number of injured workers in the target population, a 6% margin of error, and a 95% level of confidence, up to a maximum number of completed surveys of 250 workers. The recommendations are summarized in the following chart.

Table 2: Recommended sample sizes for URAC survey

Size of target population (new injured worker claims in 6 month period)	Number of completed surveys for a 6% margin of error	Sample assuming a 30% response rate	Sample assuming a 40% response rate	Sample assuming a 50% response rate
Less than 200	73	243	183	146
200-500	114	380	285	228
501 – 1000	173	577	433	346
1001 – 3000	210	700	525	420
3001 – 5000	245	817	612	490
Over 5000	250	833	625	500

URAC recommends assuming a 40% response rate, unless the MCO has prior experience with worker surveys which suggest a different response rate. Thus if 114 completed surveys is the desired number, then 380 workers need to be sampled.

Collecting the data

For initial administration of this survey **URAC recommends a mailed survey protocol**, although both protocols are described in this document.

Mailed surveys

A typical protocol for mailed administration of the survey is:

- **Advance letter:** Send an advance letter announcing the survey to the worker, one week before mailing the questionnaire
- **Survey:** Send the survey to the worker one week after the advance letter
- **Follow-up:** Send a second questionnaire with another letter to those still not responding, 10 days after the initial mailing of the survey.

This document contains sample letters that may be used to accompany or announce the survey – an advance letter, a letter to accompany the survey and a reminder postcard. The CAHPS® survey implementation manual contains additional detailed information on how to implement a survey. The manual is available at no charge from the Agency for Healthcare Research and Quality (www.ahrq.gov)

Telephone surveys

The protocol for a telephone administration of the survey may be:

- Send an advance letter announcing the survey to the worker
- Conduct telephone interview, making up to seven attempts to reach the worker.

A sample advance letter as well as a suggested telephone introduction to the survey is provided later in this appendix.

Analyzing and reporting the data

Appendix 4.1.2 includes a list of measures that can be created from the URAC survey, and includes suggestions for analysis. Appendix 4.1.3 provides mock tables for presenting the data. The MCO should use Appendix 4.1.2 for suggestions on analyzing the data in different ways, for example, by injury type, age, sex, insurance status, health status, or other factors. The survey itself is contained in Appendix 4.1.

Summary of Recommendations

- Use the "mailed survey" administration procedures
- Use a survey vendor for some or all the key functions of sampling, data collection, analysis and reporting
- Construct a sampling frame of workers injured during a specific six month period. National or regional companies should create separate sampling frames for each state to be included in the survey.
- Depending on the size of the sampling frame, draw a sample of up to 625 workers, which assumes a 40% response rate

Procedure for Preparing the Sampling Frame

This attachment presents the details for constructing the sampling frame:

- Exhibit 1 presents the inclusion/exclusion criteria
- Figure 1 displays the basic process for preparing the sampling frame.
- Figure 2 shows how to use the lists of codes to create the injury groups
- Figure 3 documents the process for dividing each injury group into 2 subgroups: one with co-morbidities and one with co-morbidities
- Appendix 3 contains the diagnostic codes that can be used to classify the injury by type.

Exhibit 1: Inclusion/Exclusion criteria for sampling frame

Case finding period:	July 1, 1999 through December 31, 1999 (or other year in same format)
Index event:	Date of Injury (DOI) during the case finding period
Inclusion criteria:	• At least one paid medical claim, with or without paid indemnity benefits • At least one visit to the MCO on or after the index event (DOI) • First visit to MCO less than or equal to 4 weeks after the date of injury • Age at DOI greater than or equal to age 18 and less than age 65
Exclusion criteria	• Exclude claims opened without benefit payment – indemnity, medical or other

Figure 1
Preparing the Sampling Frame

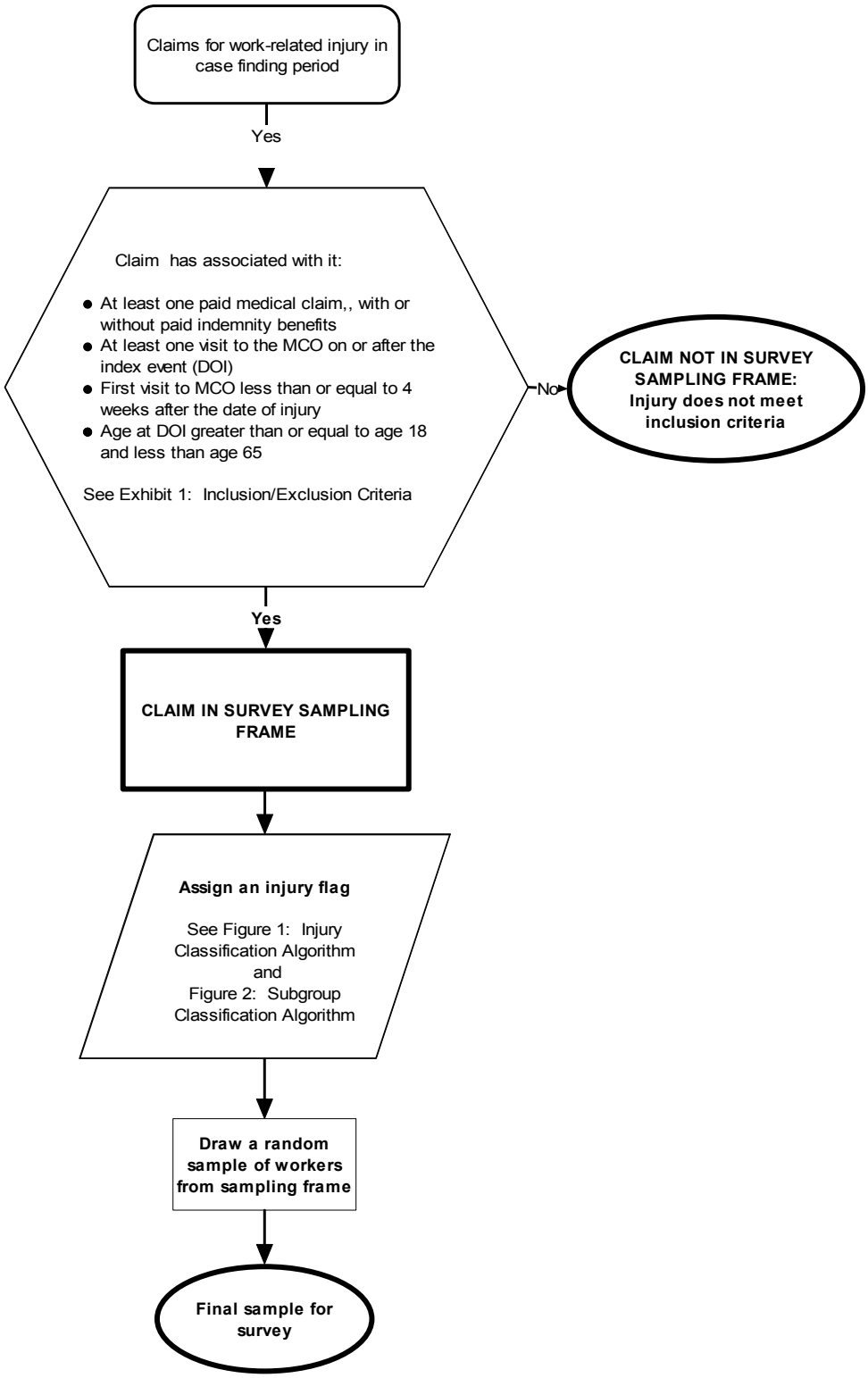


Figure 2
Injury Classification Algorithm

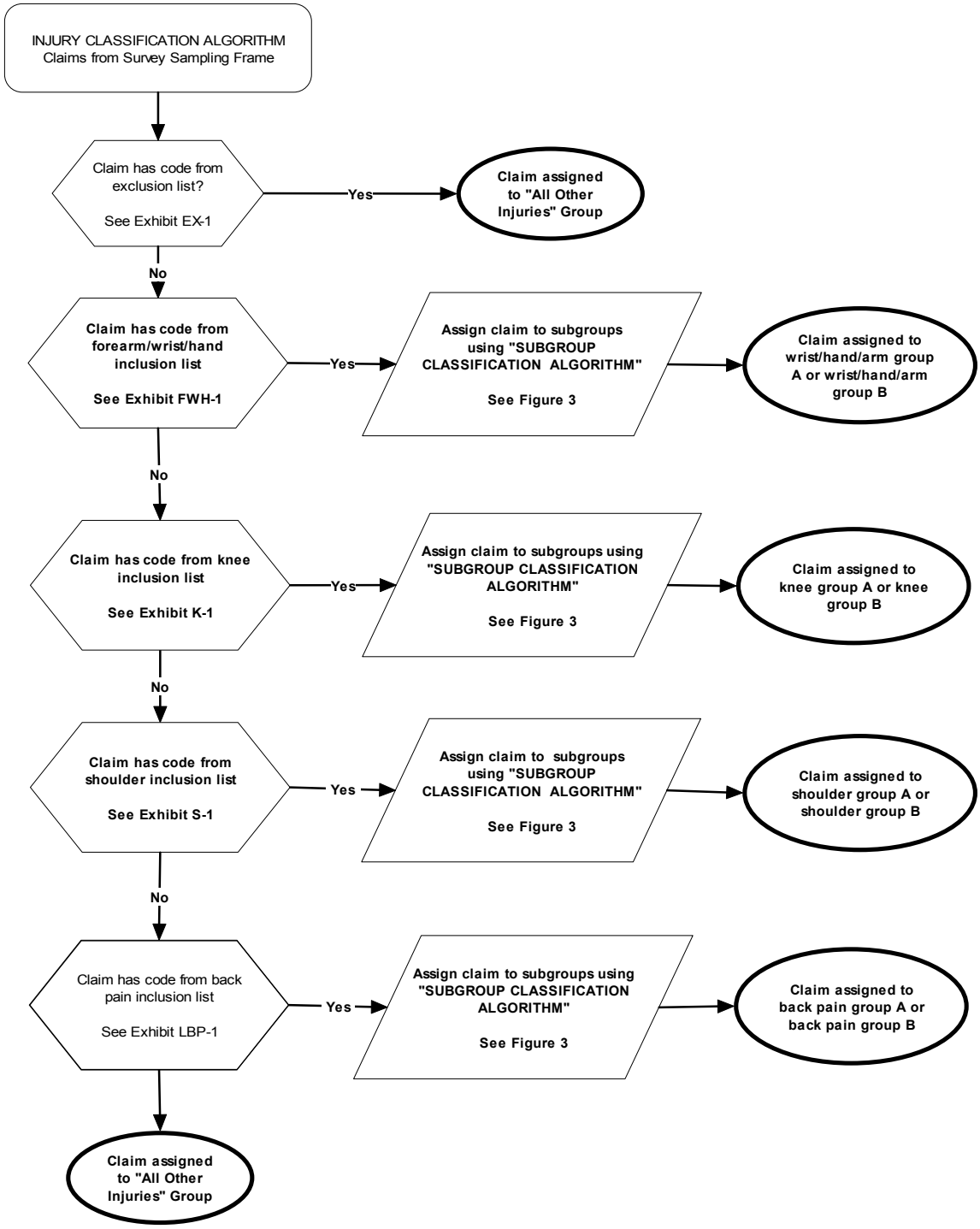
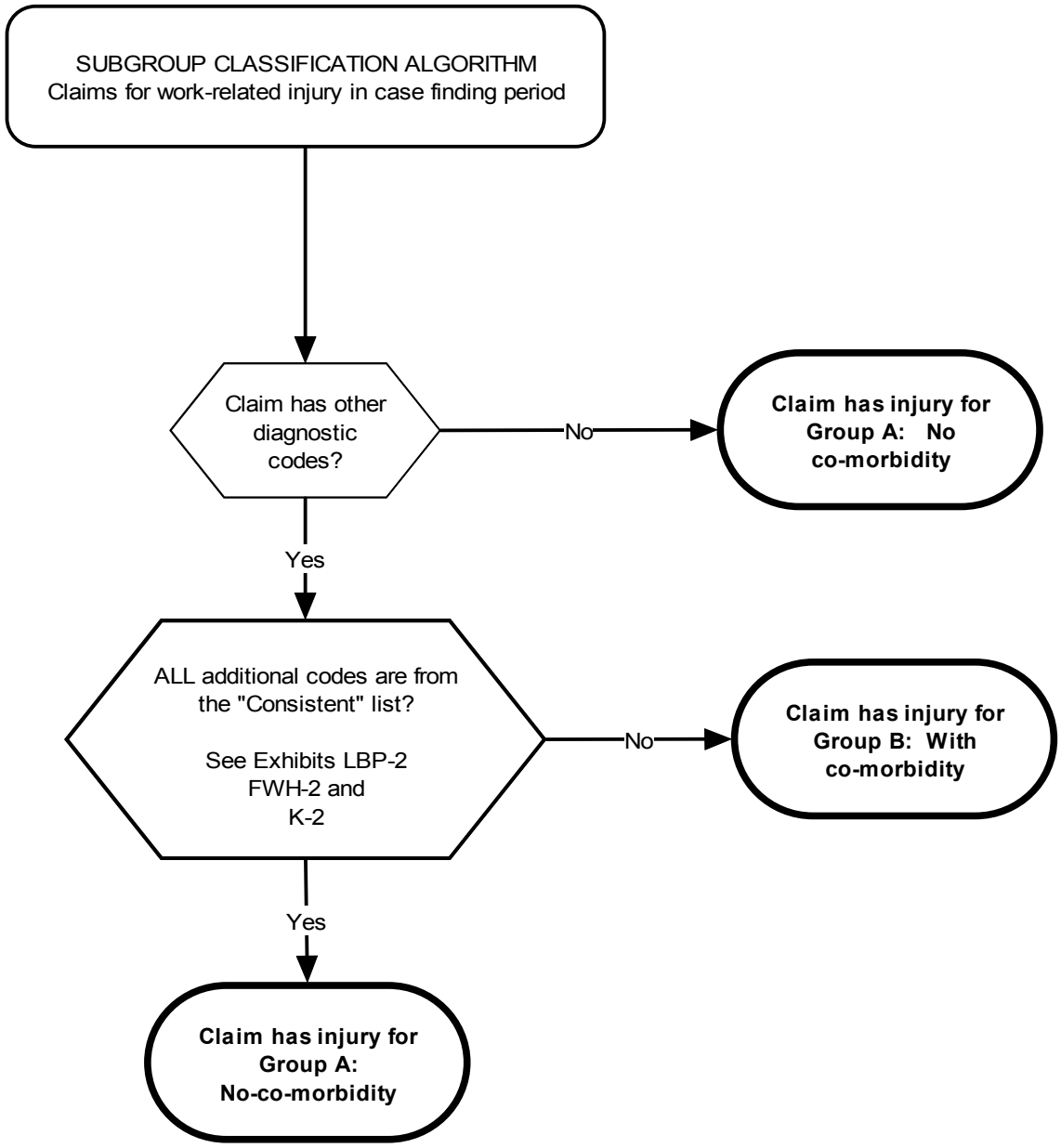


Figure 3
Subgroup Classification Algorithm



Sample Cover Letter for a MAILED Survey

Workers Compensation MCO

Address

<DATE>

Dear <WORKER NAME>:

Will you help?

We want to make sure we deliver the highest quality of care to injured workers like you. Your experience with <MCO NAME> is extremely important to us and we want to hear about it. The results of this survey will be used to improve the quality of medical care at <MCO NAME>.

Your name was selected at random from the claims files at <MCO NAME>. Your answers to this survey will be **strictly confidential.** Your comments and responses will be combined with responses from other workers in a summarized report and you will never be identified.

To learn more about the experiences of injured workers, it is very important that we hear from everyone selected to be part of this survey. Please make your experiences and opinions count by completing the enclosed questionnaire. It should take about 20 minutes to complete. **Your participation is completely voluntary.**

Thank you for taking the time to fill out this survey.

If you have any questions, please call <MCO CONTACT NAME> at <TELEPHONE NUMBER>. Thanks in advance for your help!

Sincerely,

<MCO SIGNER>

Sample Mailed Survey Reminder Postcard

NAME OF SURVEY

Hello!

About a week ago you received the <NAME OF SURVEY>

This is a **reminder** to fill out the questionnaire and mail it back in the pre-paid envelope that came with it. We need your answers.

If you have already returned the questionnaire, THANK YOU!

If you did not get the questionnaire or have misplaced it, please call <MCO CONTACT NAME> at <TELEPHONE NUMBER> and we will send another copy of the questionnaire to you.

THANK YOU.

Sample 2nd Reminder to Accompany Questionnaire

Workers Compensation MCO

Address

<DATE>

Dear <WORKER NAME>:

We need your help!

Last month, we mailed you a questionnaire as part of an important study of the care received by workers like you at <MCO NAME>. If you have not yet completed the questionnaire, please take some time today to fill it out. If you have any questions, or feel you received this survey by mistake, please call <MCO CONTACT NAME> at <TELEPHONE NUMBER>.

We want to make sure we deliver the highest quality of care to all injured workers. Your experience is extremely important to us and we want to hear about it. The results of this survey will be used to improve the quality of medical care we deliver. Your answers to this survey will be **strictly confidential.** Your comments and responses will be combined with responses from other workers in a summarized report and you will never be identified. **Your participation is completely voluntary.**

Thank you for taking the time to fill out this survey.

Sincerely,

<MCO SIGNER>

Sample Advance Letter for a TELEPHONE Survey

Workers Compensation MCO

Address

<DATE>

Dear <WORKER>:

Will you help?

We want to make sure we deliver the highest quality of care to injured workers like you. Your experience with <MCO NAME> is extremely important to us and we want to hear about it. The results of this survey will be used to improve the quality of medical care at <MCO NAME>.

An interviewer from <MCO NAME or SURVEY VENDOR NAME> will be calling you in the next week to ask you questions about your experience with <MCO NAME>. We encourage you to take the time to be interviewed. To learn more about the experiences of injured workers, it is very important that we hear from everyone selected to be part of this survey.

Your name was selected at random from the claims files at <MCO NAME>. Your answers to this survey will be **strictly confidential.** Your comments and responses will be combined with responses from other workers in a summarized report and you will never be identified. **Your participation is completely voluntary.**

If you have any questions, please call <MCO CONTACT NAME> at <TELEPHONE NUMBER>. Thanks in advance for your help!

Sincerely,

<MCO SIGNER>

Sample Introduction to Telephone Survey

Hello, may I please speak to Mr/Ms_____?

Hello, Mr/Ms_____, my name is _____ and I am calling from <MCO NAME or SURVEY VENDOR NAME>. We are conducting a survey of injured workers. The results of this survey will be used to help <"us" or MCO NAME> make sure that the highest quality of care is delivered to injured workers like you. Your participation would greatly help us. We would like to ask you some questions about your experience with <MCO NAME>. The questions will take about 20 minutes to answer. Is this a convenient time for you? *(Interviewer-if this is not convenient, arrange another time)*

Before we start, let me assure you that all your answers will be strictly confidential**.** Your comments and responses will be combined with responses from other workers in a summarized report. You will never be identified. Your participation is entirely voluntary.

Thank you very much...Are you ready to start?

Measures to be Created From Survey

Workers' Compensation Domain	Measure
Access	Getting needed care
	Wait for care
Appropriateness	Provider asks about job requirements
	Patient education about the injury given
	Provider discusses return to work
Communication	Provider communicates well with worker
	Provider treats patient with respect
Coordination	Provider involves worker in decisions about going back to work
	Provider counsels worker about work changes
	Employer helpful with return to work
Outcomes – work	Work related functioning post injury
	Initial return to work
	Returned to work but had additional lost time
	Premature return to work
Outcomes – health	Physical functioning post injury – SF12
Satisfaction	With the number of doctors to choose from
	With pain management
	With MCO doctor seen most often
	With job modifications
	Changing doctors because dissatisfied
	With medical services overall
Prevention	Injury prevention counseling

Technical Suggestions for Creating the Measures

Workers' Compensation Domain	Measure	Survey Question (s)	Potential Subgroup Analysis for Casemix/Risk (Survey Q in ()'s)	Analysis Suggestions
Access	• Getting needed care	B2a-c	None	% distribution of responses by individual item Denominator: B2a or B2b or B2c is answered, as appropriate **AND** Composite: – For each worker, the total number of each type of answer divided by the number of items answered Denominator: at least 2 items are answered (B2a or B2b or B2c
	• Wait for care	B3	None	% distribution of waits (responses = 1 – 7) Denominator: B3 is answered and B3 is not 9
Appropriateness	• Provider asks about job requirements	B7a	Type of provider (B5)	% distribution of each response Denominator: B7a is answered Subgroup analysis suggestion: By type of provider
	• Patient education about the injury given	B7b - e	Type of provider (B5)	% distribution of responses each individual item (B7b, B7c, B7d, B7e) Denominator: B7b – B7e is answered and response is not 9 **AND** Composite – For each worker, the total number of each response divided by the number of items answered Denominator: B7b – B7e is answered and response is not 9 Subgroup analysis suggestion: By type of provider

Technical Suggestions for Creating the Measures

Workers' Compensation Domain	Measure	Survey Question (s)	Potential Subgroup Analysis for Casemix/Risk (Survey Q in ()'s)	Analysis Suggestions
	• Provider discusses return to work	B7f	Type of provider (B5)	% distribution of each response Denominator: B7f is answered Subgroup analysis suggestion: By type of provider
Communication	• Provider communicates well with worker	B6c and B6d	Type of provider (B5)	% reporting "agree" or "strongly agree" on each individual item (response=3 or 4) **AND** Composite – For each worker, the average score for the items answered, excluding the 9 (don't know) response option Denominator: At least 1 item is answered (B6c and B6d) and the response is not 9 Subgroup analysis suggestion: By type of provider seen most often
	• Provider treats patient with respect	B6a and B6b	Type of provider (B5)	% reporting "agree" or "strongly agree" on each individual item (response=3 or 4) **AND** Composite – For each worker, the average score for the items answered, excluding the 9 (don't know) response option Denominator: at least 1 item is answered (B6a or B6b) Subgroup analysis suggestion: By type of provider seen most often
Coordination	• Provider involves worker in decisions about going back to work	B8	Type of provider (B5)	% distribution of responses to B8 Denominator: B8 is answered and response is not9 Subgroup analysis suggestion: By type of provider seen most often

Technical Suggestions for Creating the Measures

Workers' Compensation Domain	Measure	Survey Question (s)	Potential Subgroup Analysis for Casemix/Risk (Survey Q in ()'s)	Analysis Suggestions
	• Provider talks about work changes	B7g	Type of provider (B5)	% distribution of each response Denominator: B7g is answered and response is not 9 Subgroup analysis suggestion: Subgroup analysis by selected types of injuries and industry classification, if these data are available from sampling file. Subgroup analysis suggestion: By type of provider seen most often
	• Employer helpful about return to work	C6		% distribution of responses on each individual item Denominator: C6 is answered
Outcomes – work	• Work related functioning post injury	C11	By type of injury (A1 and A2) Pre-injury job satisfaction (C2)	% distribution of responses on each individual item Denominator C11 answered and response is not 9 **AND** Composite – Number of workers with responses in category divided by total number of responses to item. Denominator 7 of 13 items are answered with a 1, 2, 3, 4 or 5 response option Subgroup analysis suggestion: By type of injury (A1 and A2). Correlate with pre-injury job satisfaction (C2)
	• Initial return to work	C4	Injury (A1 and A2) Age (E1) Martial status (E4) Pre-injury job satisfaction (C2) Hired an attorney (E8)	Distribution of lost days (C4) Denominator C4 is answered Subgroup analysis suggestion: Subgroup analysis by injury. Correlation with age, marital status, pre-injury job satisfaction and hired a lawyer. Also correlation by industry class if available from sampling file.

Technical Suggestions for Creating the Measures

Workers' Compensation Domain	Measure	Survey Question (s)	Potential Subgroup Analysis for Casemix/Risk (Survey Q in ()'s)	Analysis Suggestions
	• Returned to work but had additional lost time	C9 and C10	Injury (A1 and A2) Age (E1)	% workers reporting additional lost time (C9) **AND** Distribution of additional lost days (C10) Denominator C9=1 and C10 is answered Subgroup analysis suggestion: Subgroup analysis by injury and age. Correlate with industry class if available from sampling file.
	• Premature return to work	C5	Injury (A1 and A2) Pre-injury job satisfaction (C2)	% Distribution of responses Denominator C5 is answered Subgroup analysis suggestion: Subgroup analysis by injury type. Correlate with pre-injury job satisfaction
Outcomes – health	• Physical functioning post injury – SF-12	D1 – D7	Injury (A1 and A2) Worker attribution of functioning to injury or other (D8) Age (E1) Gender (E2) Marital status (E4)	SF-12 score Subgroup analysis suggestion: Subgroup analysis by injury type and worker attribution of functioning to injury or other. Correlation with age, gender and marital status
Satisfaction	• Satisfaction with number of doctors to choose from	B4	Who chose first doctor (B1)	Average satisfaction with the number of doctors to choose from (B4) Denominator: B4 is answered **REPORTED WITH** Quartiles. Min, Max, 25th percentile, median, 75th

Technical Suggestions for Creating the Measures

Workers' Compensation Domain	Measure	Survey Question (s)	Potential Subgroup Analysis for Casemix/Risk (Survey Q in ()'s)	Analysis Suggestions
				percentile Subgroup analysis suggestion: Subgroup analysis by who choose the first doctor seen (B1)
	• Satisfaction with pain management	B9	By injury (A1 and A2) or Provider type (B5)	% reporting degree of helpfulness of providers in pain management (B9 – responses 1 – 4) Denominator: B9 is answered Subgroup analysis suggestion: Subgroup analysis by Injury or provider type
	• Satisfaction with MCO provider seen most often	B10	Type of provider seen most often (B4) Overall health status (D1) Switch providers (B11) Injury (A1 and A2) Health insurance (E3) Chose first doctor seen (B1)	Average satisfaction with MCO provider seen most often (B10) Denominator: B10 is answered **REPORTED WITH** Quartiles. Min, Max, 25th percentile, median, 75th percentile Subgroup analysis suggestion: Subgroup analysis by type of provider seen most often, overall health status. Correlate with switching doctors, injury type, presence of health insurance and chose first doctor seen.
	• Changing doctors	B11	Overall heath status (D1) Health insurance (E3)	% changing doctors because dissatisfied (B11=1) Denominator: B11is answered Subgroup analysis suggestion: Subgroup analysis by overall health status and presence of other insurance.
	• Satisfaction with job modifications	C8	How helpful employer was in helping return to work (c6)	Proportion with changes needed but not made (C8 =0) AND average satisfaction with job modification Denominator: C8 is answered and C8 does not equal 9

Technical Suggestions for Creating the Measures

Workers' Compensation Domain	Measure	Survey Question (s)	Potential Subgroup Analysis for Casemix/Risk (Survey Q in ()'s)	Analysis Suggestions
				Subgroup analysis suggestion: By employer helpfulness (C6)
	• Satisfaction with medical services overall	B12	Overall health status (D1) Health insurance (E3) Chose first doctor seen (B1) Satisfaction with pain management (B9)	Average satisfaction with MCO (B12) Denominator: B12 is answered **REPORTED WITH** Quartiles. Min, Max, 25th percentile, median, 75th percentile Subgroup analysis suggestion: Subgroup analysis by overall health status. Correlate with presence of other insurance, whether worker chose the first doctor seen, whether providers were helpful with pain management.
Prevention	• Injury prevention counseling	B7h	None	% reporting "Yes" that the doctor provides information about avoiding reinjury (response=1) Denominator: B7h is answered and does not equal 9

Appendix 4.1.3

Suggested Reporting Formats

This document presents graphical suggestions for summarizing and displaying the results of the survey. These are suggestions only and are by no means exhaustive. It is expected that any MCO using the survey will include additional analyses, graphs and tables of particular interest to the MCO.

Included in this packet are displays of a number of the measures that can be constructed from the survey.

In addition to the graphs presented here, it is expected that each report will include a table summary of the demographic and background information also collected by the survey. This includes:

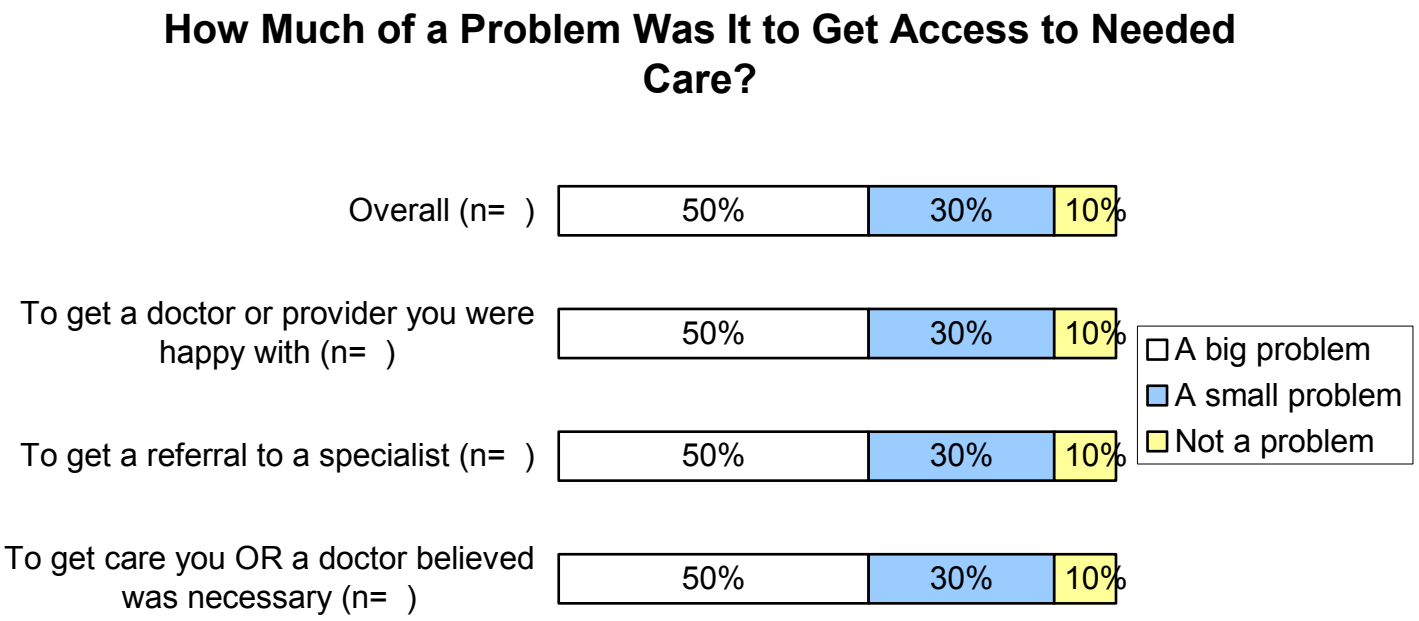
- Types of injuries reported by respondents
- Body parts injured as reported by respondents
- Worker age
- Gender
- Marital status
- Education
- Racial group
- Ethnic group
- Insurance status

These background characteristics aid in the interpretation of the data and may be used to further risk or casemix adjust the data.

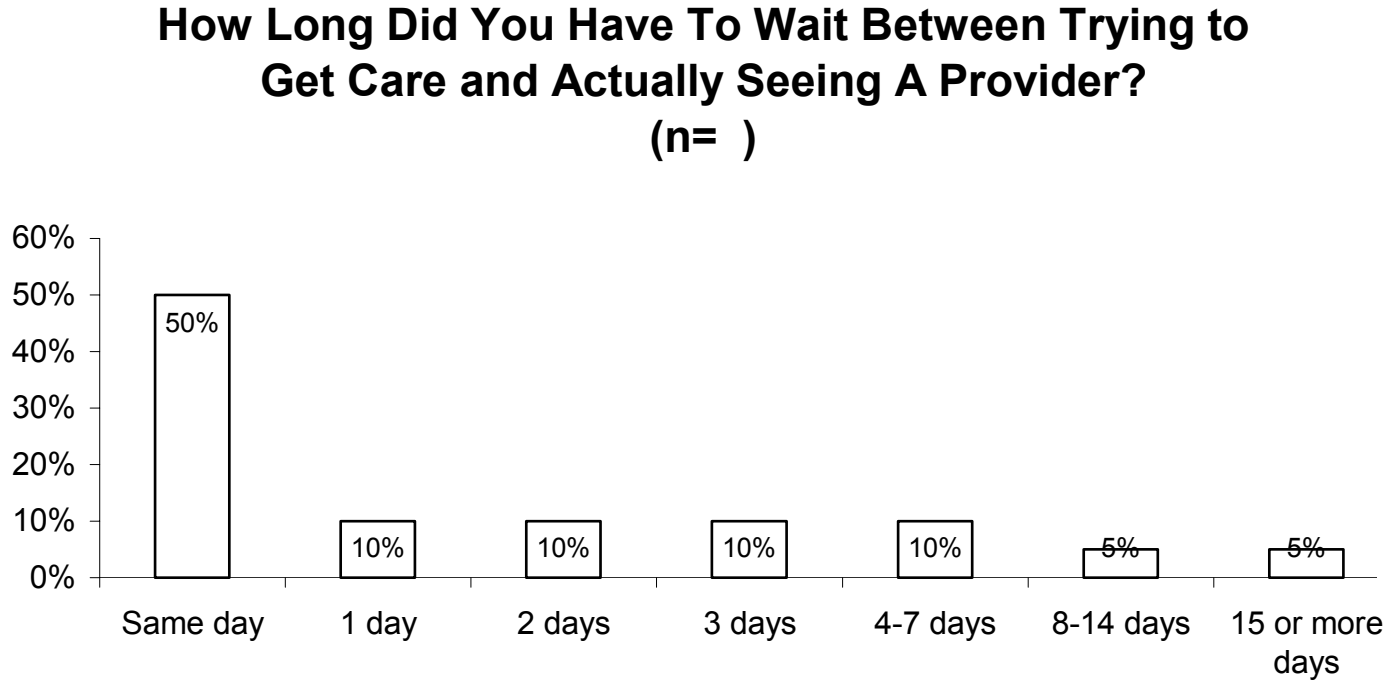
The one piece of information not collected by the survey and which may available from the sampling file, is the SIC or NAIS industry classification and worker job risk code. These data items are useful for further risk/casemix adjusting the results of the survey.

Access Measures

A2: Access to needed care

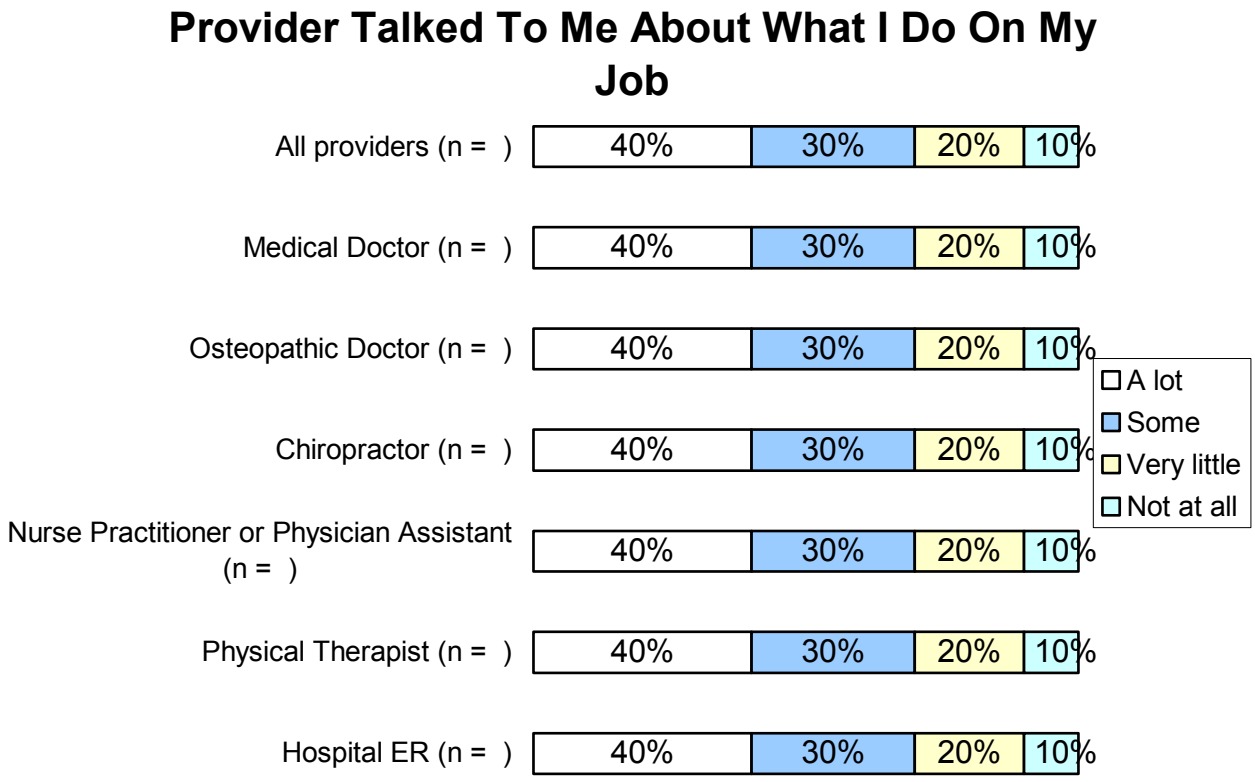


A3: Wait for Care

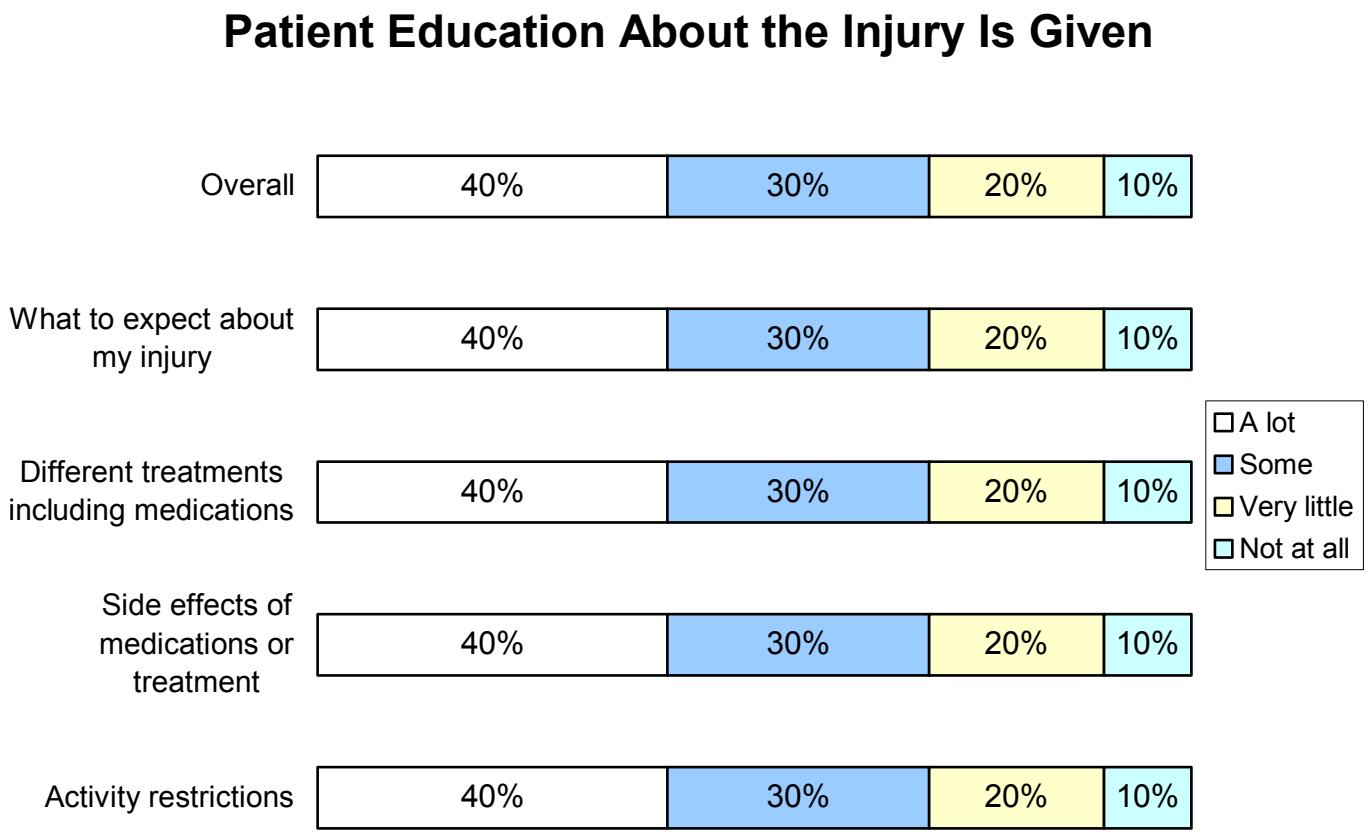


Appropriateness Measures

AP1: Provider asks about job requirements

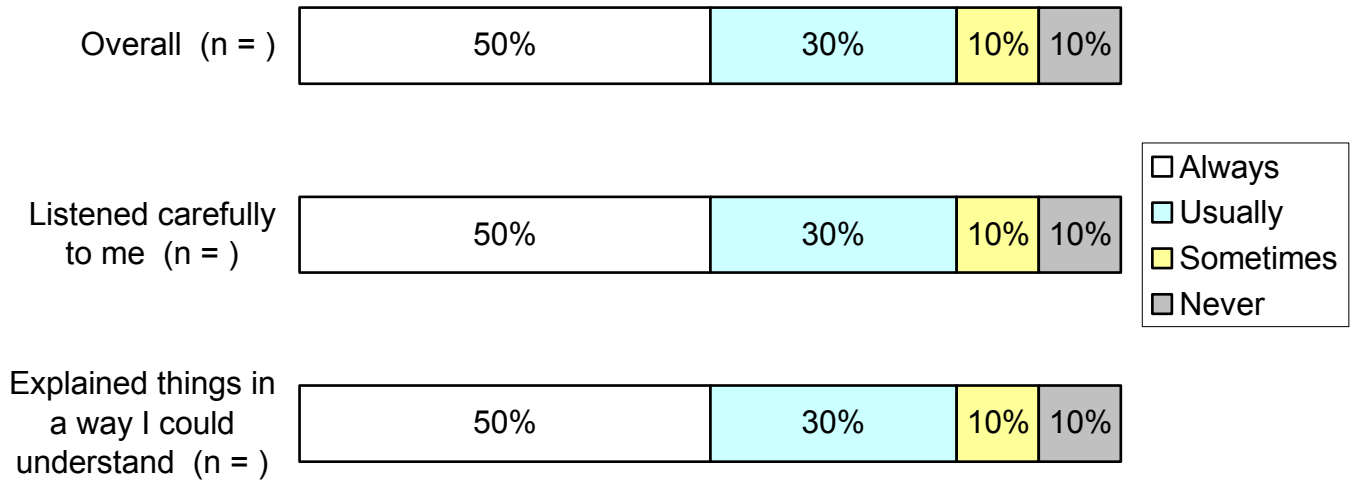


AP2. Patient education given

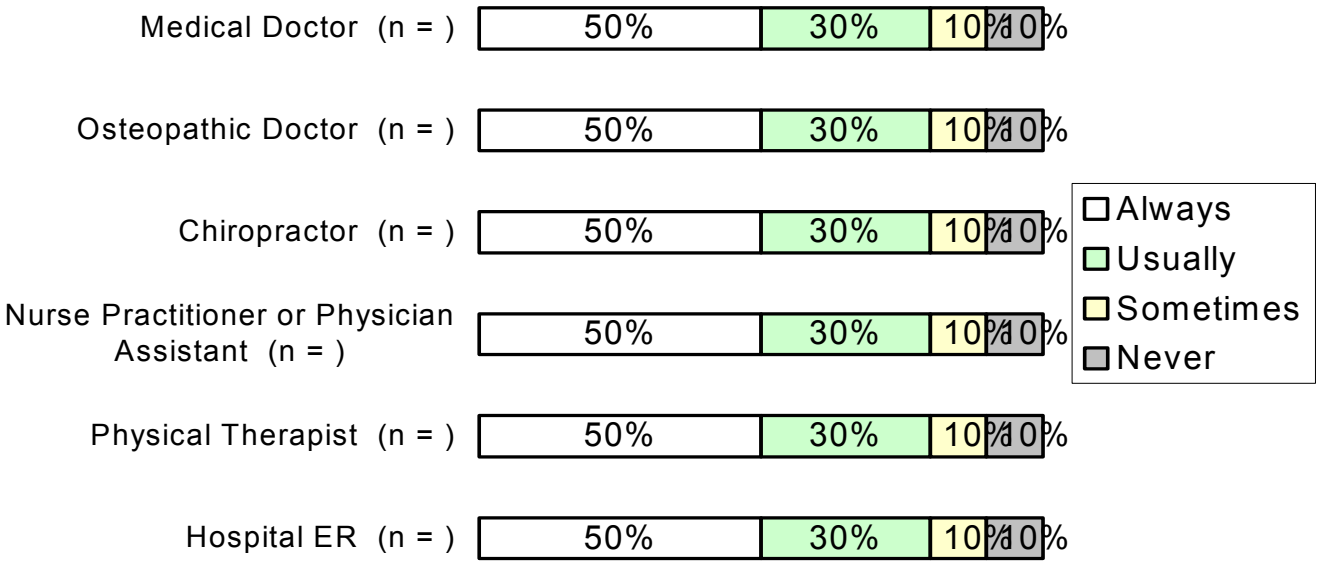


Communication

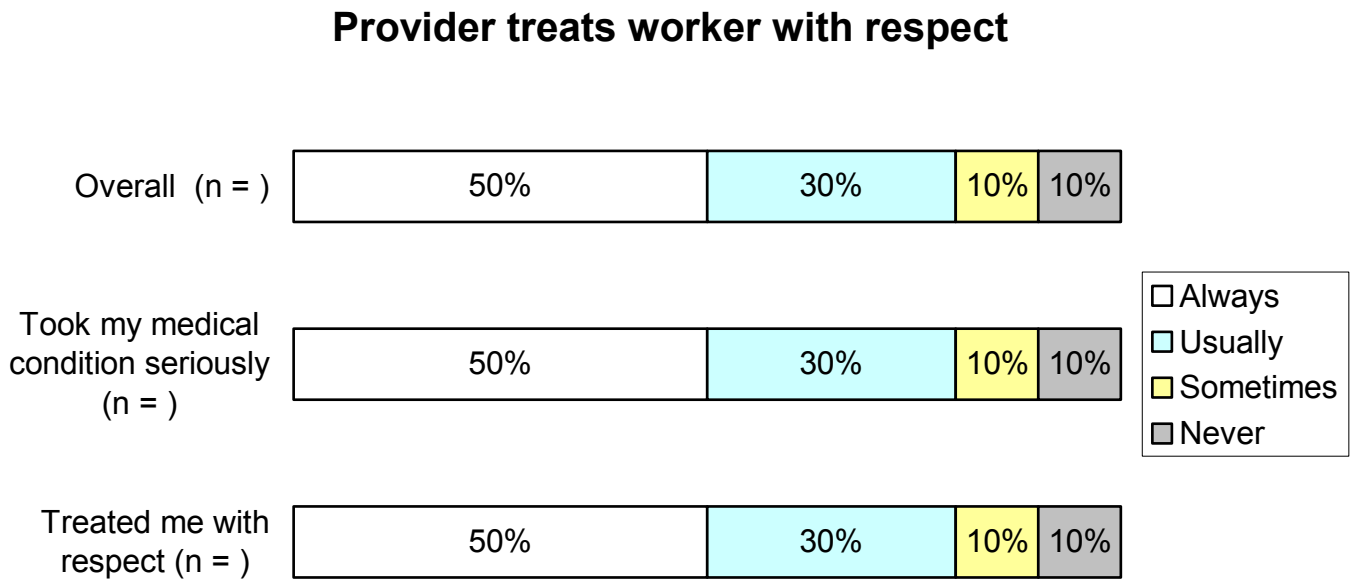
Provider communicates well with worker



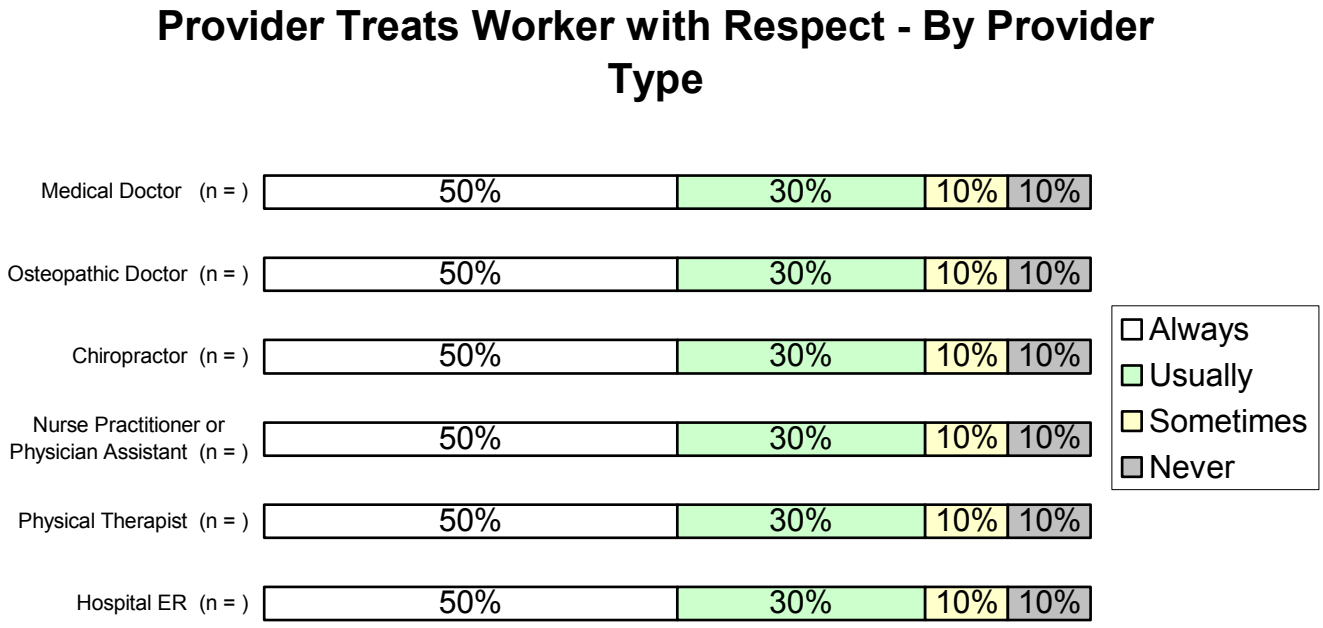
Provider Communicates Well With Worker - By Provider Type



Provider treats worker with respect - overall

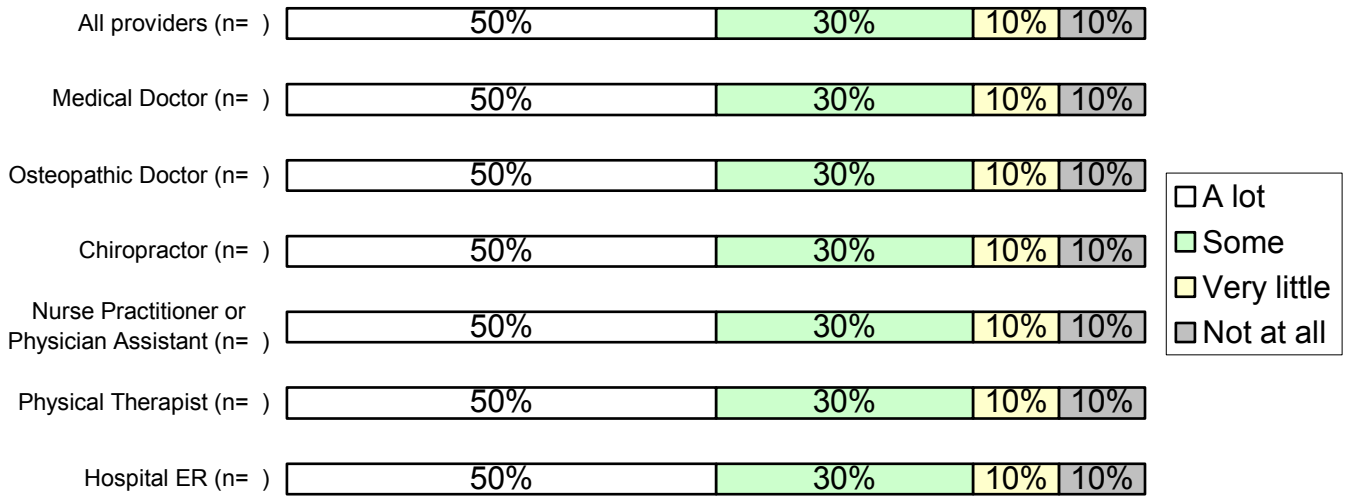


Treats worker with respect – detail

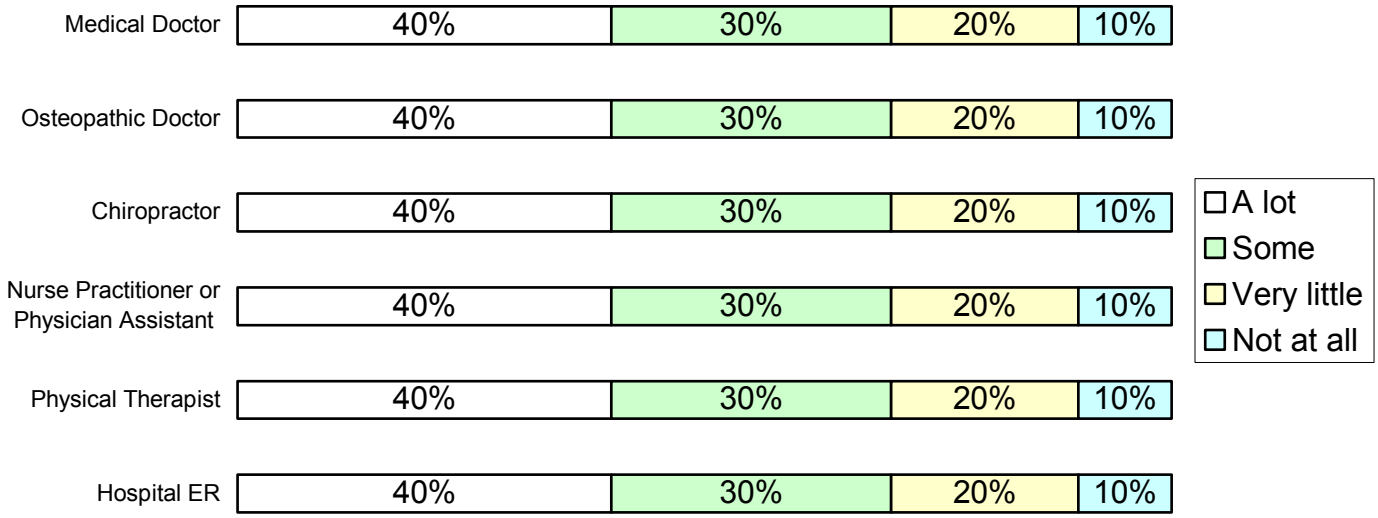


Coordination

Provider Involves Worker in Decisions About Return to Work

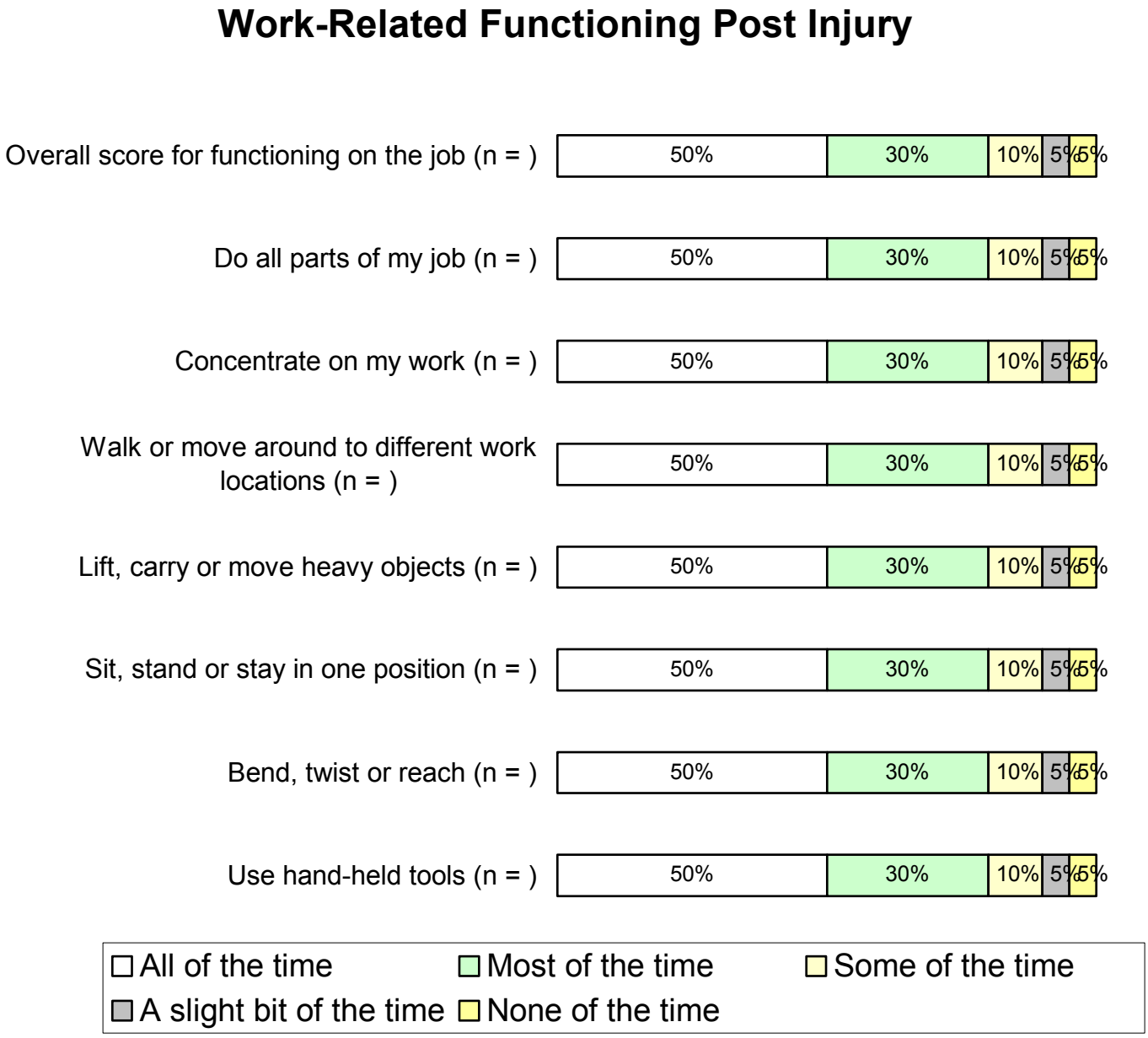


MCO Provider Discusess Work Changes With Worker

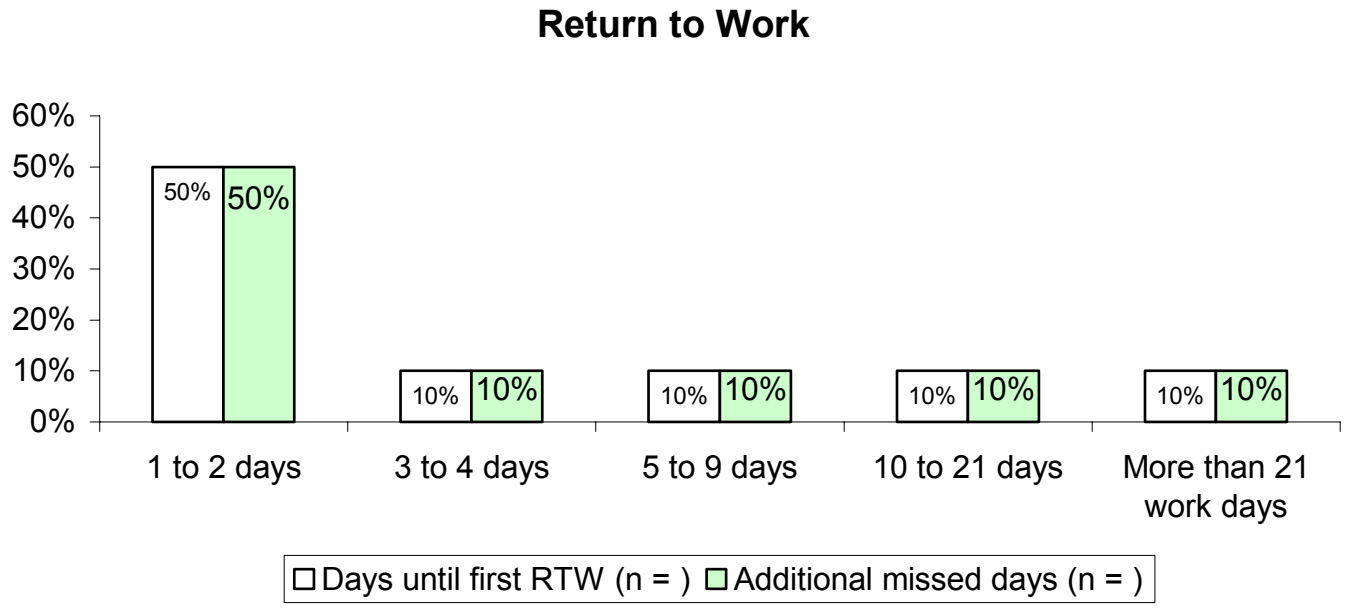


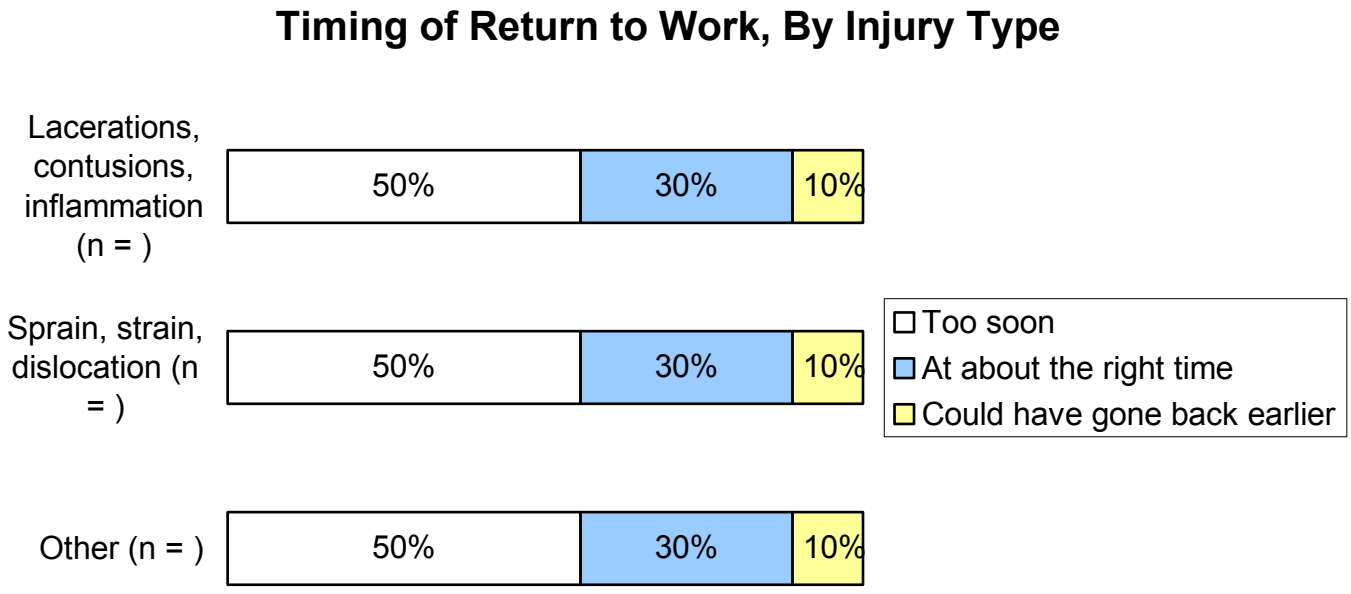
Outcomes – Work

O!1: Work-related functioning

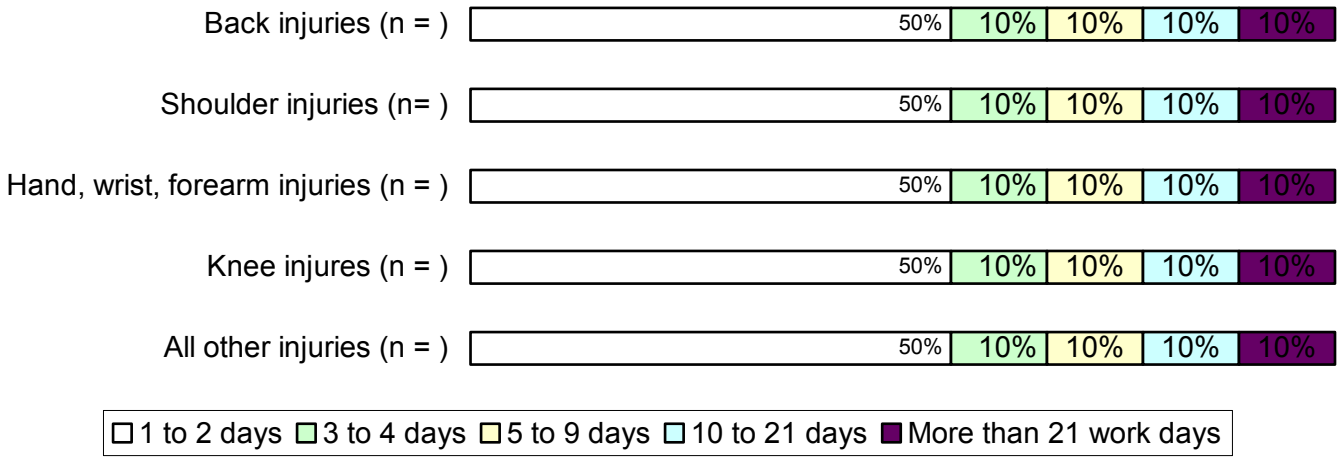


WO: Other work outcomes

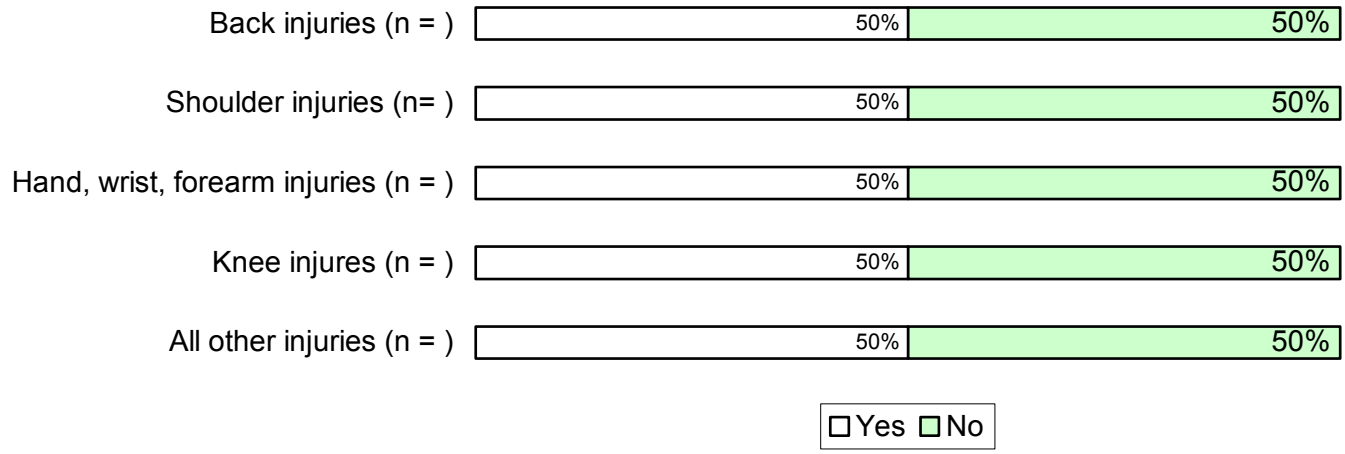




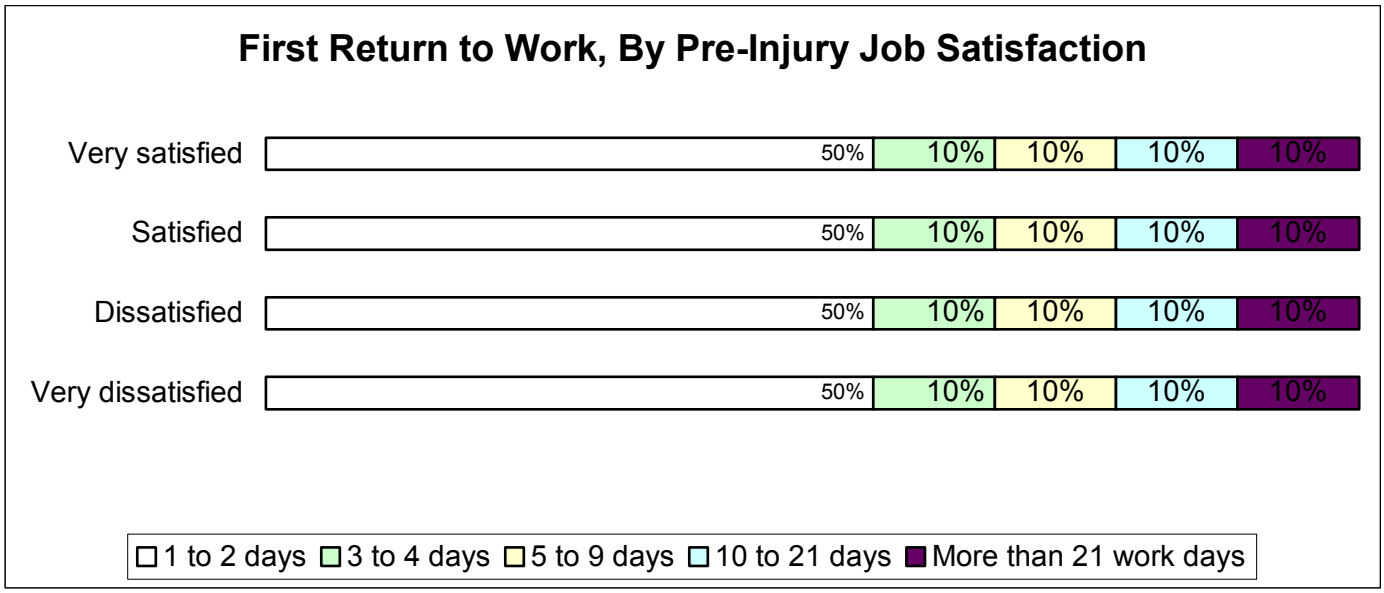
First Return to Work for Selected Injuries



Returned to Work But Had Additional Lost Time



WO: Optional chart to aid interpretation – Not useful for quality improvement



Outcomes – Health

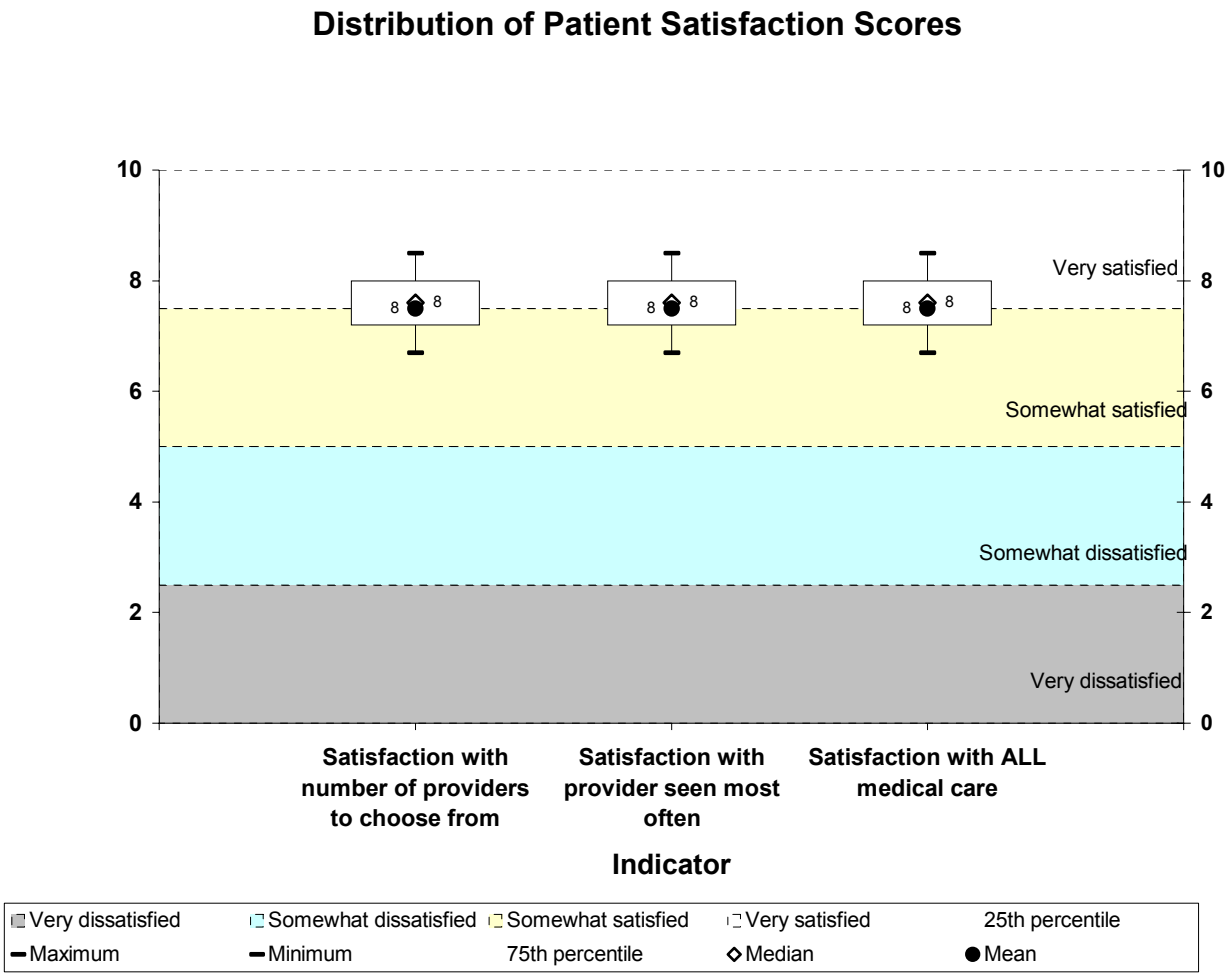
Post-Injury SF-12 Score, Selected Injury Body Sites

Back injuries (n =)	70
Shoulder injuries (n=)	70
Hand, wrist, forearm injuries (n =)	70
Knee injures (n =)	70
All other injuries (n =)	70

Post-Injury SF-12 Score, Selected Injuries Types

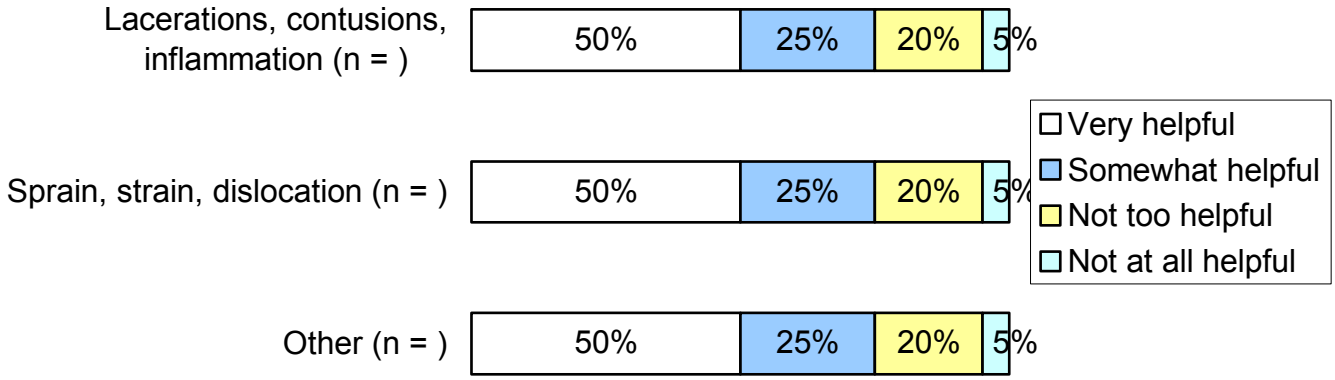
Laceration, contusion, inflammation (n =)	70
Sprain, strain or dislocation (n =)	70
All other injuries (n =)	70

Satisfaction



S2: Other satisfaction measures

Helpfulness of Providers in Managing Pain, By Injury Type



Changed doctors because of Dissatisfaction

Definition of Measures of Return to Work, Utilization and Cost For Workers Compensation Managed Care Organizations, Using Administrative Data Sources

Section 1: Overview

This Appendix provides detailed definition of the measures to be calculated from administrative data files—the files that result from the fundamental processes of claim administration, benefit payment, medical bill review, utilization management and case management.

The administrative measures defined here require a total of 44 reports. However, these reports use only eight different formats. Multiple reports for most of the formats are generated by using different claim groups—the 60-day and 18-month claim groups and/or the eight categories of complicated or uncomplicated injuries.

Administrative Data Files

Most of the measures defined here can be calculated using data from one or more of the following three data files that are common to workers compensation systems:

1. Claim File.

   This file typically has one large record containing information for each workers compensation claim that has been opened. In most systems this record is updated continuously, to reflect cumulative benefits paid and other information that changes over time. The file reflects the latest status for each claim, but it cannot be used to reconstruct claim status (e.g.: cumulative indemnity cost) as of a prior point in claim history.

2. Payment File.

   The Payment File typically has one record for each payment made for each claim, identifying the claim, the payee (claimant or vendor), type of benefit being paid, amount paid, payment date, and benefit period covered by the payment. In most systems this record is not updated once created, although the file itself grows continuously for each claim, until the claim is closed. This file can be used to reconstruct claim status as of a prior point in claim history.

3. Provider Billing File.

   This file contains data records derived from adjudication of bills submitted by physicians, hospitals, and other providers of medical services to injured workers. In most systems this file retains data for each procedure billed by these providers, including date of service, procedure code, and related diagnosis code. Using date of service, this file can be used to reconstruct the medical services history of the claim.

In most systems these three files have a claim identification number as a common data element, enabling data from the files to be linked. This capability is assumed in the definition of measures provided here.

MCOs may also have electronic data files resulting from utilization management and case management activities—files that contain information not available in the three administrative files listed above. However, the structure and content of these additional MCO administrative data files vary considerably from one MCO to another. Only a few of the measures defined here requires use of these data.

Claim Selection

The unit of observation for all measures is the claim. Some injured workers will have two or more claims open simultaneously. Also, for some workers two or more claims may be opened during the case-finding period on which the measures are based. Nevertheless, the measures defined here are based on linkage of data for individual claims, not for individual injured workers.

In some systems the Claim File may contain records for claims that are opened, but which actually result in no benefit payment—indemnity, medical or other. *Such claims should be excluded from all measures.*

Case-Finding Periods

Claims are to be selected on the basis of the date of injury occurring within a defined period of time, which we refer to as the case-finding period. The administrative measures are to be calculated for two different analysis time windows, as follows:

1. The first 60 days after the date of injury. For example, the measure might call for the sum of amounts paid for medical services received within the first 60 days of each claim's history—the interval from date of injury through that date plus 60 days. These are referred to as 60-day measures. The group of claims selected for calculation of these measures ss the 60-day claim group.

2. The first 18 months after the date of injury. For example, the measure might call for the sum of indemnity benefits paid within the first 18 months of each claim's history—the interval from date of injury through that date plus 548 days. These are referred to as 18-month measures. The group of claims selected for calculation of these measures is the 18-month claim group.

These analysis time windows set a limit on how recent the case-finding period may be, in order to assure that data for the case-finding period are complete. For example, if 1999 calendar year is the case-finding period for the 60-day claim group, data extraction could occur on or after 1 July 2000, allowing approximately four months for the data completion.

For the 18-month claim group, a case-finding period of July 1997 through June 1998, with data extraction occurring on or after 1 July 2000, would give six months to allow for data completion. The remainder of this Appendix uses these dates as an example of how to define the 60-day and 18-month claim groups. MCOs who use the suggested measures in the future should select appropriate case-finding periods relative to the completeness of their administrative data.

Diagnosis-Based Claim Groups

Some of the administrative measures will be calculated for claims grouped on the basis of the diagnosis codes that occur in the provider billing data. The following four diagnosis groups have been defined:

1. Regional lower back pain, sprain and strain (Low Back Pain, or LBP).
2. Shoulder pain, sprain and strain (Shoulder).
3. Knee pain, sprain and strain (Knee).
4. Forearm, wrist and hand pain, sprain and strain (FWH).

Claims falling in each of these four groups will be further subdivided into two subgroups—those that have other diagnoses, and those that do not. We will refer to these subgroups as "Group A, No co-morbidity" for claims without additional diagnoses, and "Group B, With co-morbidity" for claims that do have additional diagnoses. Thus, there will be a total of eight diagnosis-based claim groups: LBP Group A, LBP Group B, Shoulder Group A, Shoulder Group B, etc.

Appendix 3 has detailed instructions for classifying claims on the basis of diagnosis codes. Certain measures will be calculated only for these eight diagnosis groups. Other measures will be calculated for the general selection of claims as well as for these diagnosis groups.

Measure Categories

The measures fall into five categories:

1. Benefit Cost Statistics
2. Case Management Statistics
3. Return to Work Statistics
4. Utilization and Cost Patterns for Medical Services
5. Treatment Patterns for Selected Diagnosis Groups

The remainder of this document provides detailed specifications for calculation of these measures.

Section 2: Benefit Cost Statistics

Section 2.1: All Claims

Table Format

Exhibit 1 shows the format for presentation of benefit cost statistics. The table presents the cost of benefits provided within the first 60 days after the date of injury, for claims with date of injury in the period January – December 1999.

Exhibit 1: Example of 60-Day Benefit Cost Statistics

Benefit Category [1]	Claims Paid* [2]	Benefit Payments** Amount [3]	Mean [4]	Median [5]
A. Indemnity Claims				
Medical	6,070	$7,895,838	$1,301	$974
Temporary Disability	6,029	$11,532,299	$1,913	$1,540
Permanent Disability	61	$25,518	$419	$460
Other	264	$230,644	$874	$580
Indemnity Subtotal	6,070	$19,684,300	$3,243	$2,841
B. Medical Only Claims				
Medical	5,237	$1,571,053	$300	$164
Other	284	$396,487	$1,395	$499
Medical Only Subtotal	5,237	$1,967,540	$376	$169
C. All Claims				
Medical	11,307	$9,466,891	$837	$454
Temporary Disability	6,029	$11,532,299	$1,913	$1,540
Permanent Disability	61	$25,518	$419	$460
Other	548	$627,131	$1,144	$539
Total	11,307	$21,651,840	$1,915	$775

*** Claims with date of injury in the period January - December 1999.**

**** Payment for benefits received within the first 60 days after the date of injury.**

Indemnity vs. Medical Only Claims

Section A of the table is for indemnity claims. An indemnity claim is a claim with any form of wage replacement compensation for time lost within the analysis time window, which in this case is the first 60 days after the date of injury. Claims with no such compensation are designated Medical Only claims, for which statistics are presented in Section B of the table.

The Payment File would be used to differentiate between Indemnity and Medical Only claims, since it is necessary to evaluate benefits incurred during the first 60 days of claim history. A Payment File usually has a code for the benefit that was paid and "from" and "through" dates defining the benefit period. The "from" date should be used to decide whether a benefit was incurred within the first 60 days of claim history. If the "from" date is blank, or is not a data element in the Payment File, use the date of payment minus 30 days as date for deciding whether the benefit was incurred within the first 60 days of claim history.

Section C of the table is for both types of claims combined.

Benefit Categories

The table uses the following four broadly defined benefit categories:

1. Medical—All services provided by hospitals, clinics, physicians and other health care professionals, including medical-legal services. Administrative fees for bill review, utilization management or case management should *not* be included in this category.

2. Temporary Disability—All payments for temporary total or temporary partial disability.

3. Permanent Disability—All payments for permanent disability, including advances and "compromise and release" settlements.

4. Other—All payments not included in the first three categories.

Claims Paid

Column 2 in the table in Exhibit 1 shows claim counts by combination of claim type (Indemnity or Medical Only) and benefit category. Each line shows the number of claims for which some payment in the benefit category was made.

Note that the Indemnity Subtotal claim count in Section A is an unduplicated count of Indemnity claims. It is not the sum of the claims counted for each benefit category in Section A. Similarly, the Medical Only Subtotal claim count in Section B is an unduplicated count of Medical Only claims.

These claim counts can be derived from the Payment File, by counting claims for which there exists a payment record with a "from" date within the first 60 days of claim history. If the "from" and "through" dates are blank for medical services, the Provider Billing File may be a better source for identifying claims with medical benefits. In the Provider Billing File, check for dates of service within the first 60 days of claim history.

Benefit Payments

Column 3 in the table shows the amount of benefit payment incurred within the first 60 days of claim history, for each benefit category and claim type combination. For the Medical benefit category, "incurred" means that the date of service was within the 60-day window. For the other benefit categories, "incurred" means that the "from" date of service in the Payment File fell within that window.

Column 4 shows the mean (average) payment amounts—the payment amount in column 3 divided by the paid claims count in column 2.

Finally, column 5 shows the median payment amount for each benefit category and claim type combination (plus the medians for each subtotal line and the total line). The median value is that value just large enough to account for half of the paid claim. In Exhibit 1, for example, the first line of the table shows that 50% of the Indemnity claims had medical cost of $974 or less.

(Median values are not commonly included in workers compensation cost statistics. However, they can provide useful information when used in conjunction with the mean. The mean value can be strongly affected by a few very high-cost claims, but the median value is not so affected. If the mean value is considerably higher than the median value, it is an indication that an unusual number of high-cost claims have been included in the calculation.)

18-Month Measures

The reporting format for the 18-month benefit cost measures is exactly the same as for the 60-day measures. Exhibit 2 shows an example of these statistics.

Exhibit 2: Example of 18-month Benefit Cost Statistics

Benefit Category [1]	Claims Paid* [2]	Benefit Payments** Amount [3]	Mean [4]	Median [5]
A. Indemnity Claims				
Medical	5,603	$21,805,947	$3,892	$1,522
Temporary Disability	5,583	$27,424,706	$4,913	$2,061
Permanent Disability	1,523	$6,617,434	$4,346	$3,654
Other	1,441	$3,716,481	$2,579	$837
Indemnity Subtotal	5,603	$59,564,567	$10,631	$4,326
B. Medical Only Claims				
Medical	5,359	$2,111,367	$394	$176
Other	650	$2,743,829	$4,224	$742
Medical Only Subtotal	5,359	$4,855,196	$906	$196
C. All Claims				
Medical	10,962	$23,917,314	$2,182	$540
Temporary Disability	5,583	$27,424,706	$4,913	$2,061
Permanent Disability	1,523	$6,617,434	$4,346	$3,654
Other	2,091	$6,460,310	$3,090	$832
Total	10,962	$64,419,763	$5,877	$850

*** Claims with date of injury in the period July 1997 - June 1998.**

**** Payment for benefits received within the first 18 months after the date of injury.**

The statistics presented in Exhibit 2 are defined the same as those in Exhibit 1, with the exception that they represent benefits paid within the first 18 months of claim history. Since a "month" has a variable number of days, the first 18 months of claim history is defined to mean the date of injury plus 548 days.

Section 2.2: Selected Diagnosis Groups

The benefit cost statistics should also be calculated for each of eight diagnosis-based claim groups. Appendix 3 describes how to classify claims on the basis of the diagnosis codes that appear for each claim in the Provider Billing File. The result of the classification process will be discrete claim groups that represent the following four common types of injury, further subdivided by the presence or absence of additional diagnoses:

- LBP Group A -- Regional low back pain, sprain and strain, without additional diagnoses
- LBP Group B – Regional low back pain, sprain and strain, with additional diagnoses
- Shoulder Group A – Shoulder pain, sprain and strain, without additional diagnoses
- Shoulder Group B – Shoulder pain, sprain and strain, with additional diagnoses
- Knee Group A – Knee pain, sprain and strain, without additional diagnoses
- Knee Group B – Knee pain, sprain and strain, with additional diagnoses
- FWH Group A -- Forearm/wrist/hand pain, sprain and strain, without additional diagnoses
- FWH Group B – Forearm/wrist/hand pain, sprain and strain, with additional diagnoses

These four groups do not include all types of injury, of course. The claims that qualify for these groups will probably represent from 30% to 50% of the total claims.

Exhibit 3 shows the presentation format for 60-day benefit cost statistics by diagnosis group, for the four "Group A" diagnosis groups.

Exhibit 3: Example of 60-Day Benefit Cost Statistics by Diagnosis Group

Statistic [1]	LBP Group A [2]	Shoulder Group A [3]	Knee Group A [4]	FWH Group A [5]
1. Number of Claims	2,233	1,157	800	690
2. Medical Cost				
a) Amount	$2,449,814	$1,822,897	$592,552	$812,242
b) Mean	$1,097	$1,575	$741	$1,177
c) Median	$696	$942	$531	$778
3. Temporary Disability Cost				
a) Amount	$2,866,349	$1,568,478	$1,200,002	$720,411
b) Mean	$1,284	$1,356	$1,500	$1,044
c) Median	$904	$280	$1,215	$755
4. Permanent Disability Cost				
a) Amount	$11,199	$9,338	$1,330	$1,100
b) Mean	$5	$8	$2	$2
c) Median	$0	$0	$0	$0
5. Other Cost				
a) Amount	$119,388	$8,955	$512	$38,169
b) Mean	$53	$8	$1	$55
c) Median	$0	$0	$0	$0
6. Total Cost				
a) Amount	$5,446,750	$3,409,667	$1,794,396	$1,571,923
b) Mean	$2,439	$2,947	$2,243	$2,277
c) Median	$1,720	$1,539	$2,366	$1,483

Note: All costs are for benefits incurred within the first 60 days after the date of injury, for claims with date of injury from January through December 1999.

The four "Group A" diagnosis groups are represented as columns in the table. The four benefit categories are the same as used in Exhibits 1 and 2 for all claims. Note that in this table the mean and median cost statistics are defined across all claims in each diagnosis group. As a

result, the median cost may well be zero, even when the mean cost is greater than zero. This simply means that more than half of the claims had no cost in the benefit category. For examples of this, in Exhibit 3 refer to Section 4, Permanent Disability Cost.

Exhibit 3 represents costs within the first 60 days of claim history, for claims with date of injury from January through December 1999, for the "Group A" subsets of each of the four diagnosis categories. Exactly the same format should be used to report these statistics for the following three claim groups:

- First 60 days of claim history, claims with date of injury from January through December 1999, "Group B" subsets of the four diagnosis groups.
- First 18 months of claim history, claims with date of injury from July 1997 through June 1998, "Group A" subsets of four diagnosis groups.
- First 18 months of claim history, claims with date of injury from July 1997 through June 1998, "Group B" subsets of four diagnosis groups.

Section 3: Case Management Statistics

The case management statistics defined for reporting assume that the MCO has an administrative data file derived from the case management process, with at least the following data elements for each referred case:

- Claim number
- Date of injury
- Date of referral to case management
- Date of case manager's initial contact with the injured worker

After initial testing of these performance measures, we recognize that many systems do not have the information specified above. This may result in a bias that affects the reported performance indicator. We recommend that MCOs begin to use this information for internal quality improvement purposes, while developing information management systems that captures case management data more effectively.

Reporting Format

Exhibit 4 shows the reporting format for the case management statistics.

Exhibit 4: Example of Case Management Statistics

Statistic [1]	60-Day Claims* [2]	18-Month Claims** [3]
1. Total claims	11,307	10,962
2. Case-managed claims		
2.1 Number	3,731	2,631
2.2 Percent of total	33%	24%
3. Referral Time		
3.1 Number referred in 30 days	3,022	1,999
3.2 30-day referrals as % of total	81%	76%
3.3 Avg days, injury to referral	22.1	25.8
4. Contact Time		
4.1 Number contacted in 7 days	2,649	1,552
4.2 7-day contacts as % of total	71%	59%
4.3 Avg days, referral to contact	8.2	9.4

* Claims with injury during Jan - Dec 1999, referred in first 60 days.

** Claims with injury during Jul 97 - Jun 98, referred in first 18 months.

Claim Groups

The table has two columns for reporting case management statistics, one for each of the two claim groups:

1. Claims with date of injury during January – December 1999. The case management statistics should be based on claims referred to case management within the first 60 days of claim history.

2. Claims with date of injury during July 1997 – June 1998. The case management statistics should be based on claims referred to case management within the first 18 months of claim history.

Statistics

Following are the definitions of statistics shown on each line:

- Line 1 -- total claims for each of the two groups.
- Line 2.1 -- the number of claims referred to case management.
- Line 2.2 -- number of claims on Line 2.1 as a percent of the total claims in Line 1.
- Line 3.1 -- number of claims that were referred to case management within 30 days of the date of injury.
- Line 3.2 -- number of claims referred in 30 days (Line 3.1) as a percent of the total number of claims referred to case management (Line 2.1).

- Line 3.3 – total number of days from injury to referral, for all referred claims, divided by the number of referred claims.

- Line 4.1 -- number of referred claims for which the case manager contacted the injured worker within seven days of the date of referral.

- Line 4.2 -- number of claims on Line 4.1 as a percent of the total case-managed claims in Line 2.1.

- Line 4.3 -- total days from date of referral to date of first contact by the case manager, for all referred claims, divided by the number of referred claims.

Section 4: Return to Work Statistics

Reporting Format

Like case management, URAC recognizes that there are significant problems with data integrity relating to return to work statistics. URAC recommends that MCOs use existing data for internal quality improvement and benchmarking, while striving to develop better data and more accurate data to populate these performance measures. Exhibit 5 shows the reporting format for return to work statistics.

Exhibit 5: Example of Return to Work Statistics

	Statistic [1]	60-Day Claims [2]	18-Month Claims [3]
1	Number of lost time claims	6,070	5,603
2	Percent with return to work within…		
	a) 30 days	51%	46%
	b) 60 days	61%	57%
	c) 180 days	--	69%
	d) 18 months	--	82%
3	Lost time days		
	a) Number	188,758	403,238
	b) Mean	31.1	72.0
	c) Median	22	31
4	Total compensated days		
	a) Mean value	32.3	93.1
	b) Median value	23	36

Claim Groups

The table has columns for each of the two claim groups, defined the same way as in the previous tables.

Lost Time Claims

A lost time claim is defined in the same way as an Indemnity claim (Section 2)--any claim that had a wage replacement benefit incurred within the relevant interval of claim history. For the claims represented in Column 2, the relevant interval is the first 60 days; for the claims represented in Column 3, it is 548 days (18 months).

Percent with Return to Work

Section 2 of the report shows the percent of claims that had return to work within the specified intervals—30 days after injury, 60 days after injury, 180 days after injury and 18 months after injury. (The last two intervals will not be applicable for the 60-day claim group, of course.)

In some administrative data systems a reliable date of return to work may not be available. If this is the case, return to work may be inferred by noting in the Payment file the last date for which a wage replacement benefit was paid. For example, if a claim had no wage replacement benefit after 30 days from the date of injury, the claim may be considered to have returned to work within 30 days.

Lost Time Days

Section 3 of the report shows the total number of lost time days for each of the two claim groups, the mean number of lost time days and the median number of lost time days.

As with return to work date, in some systems the number of lost time days may not be available reliably. Usually, however, the wage replacement rate of pay (per day) is available. The number of lost time days may be estimated by dividing the total amount paid for temporary disability wage replacement by this wage replacement rate for the claim.

Total Compensated Days

Recent research indicates that the most accurate estimate of lost time, using information commonly available from Claim and Payment files, is a statistic that uses the total paid for all forms of wage replacement benefits together with the daily temporary disability benefit rate.[1] This statistic is similar to a count of lost time days for the claim, but is calculated differently. We will refer to it as "total compensated days" for the claim.

Specifically, for each claim in the 60-day claim group, the number of total compensated days is calculated as follows:

TCD60D = TWRB/TDBR, where…

- TCD60D is the total compensated days for the first 60 days of the claim's history,
- TWRB is the total of all forms of wage replacement benefit incurred for the claim within the first 60 days of claim history, and
- TDBR is the temporary disability benefit rate for the claim—amount paid per day for temporary disability.

[1] Krause N, et. Al. Alternative approaches for measuring duration of work disability after low back injury based on administrative workers' compensation data. Am. J. Ind. Med. 35:604-618, 1999.

The value of TCD60D should be calculated for each claim, and then summed for all claims to get the denominator for the mean value shown on line (a) of Section 4 of the report. Line (b) shows the median value of the Index.

For the 18-Month claim group, the calculation logic is the same, except that the analysis time window for each claim is extended to 18 months (548 days).

Section 5: Utilization and Cost Patterns for Medical Services

Section 5.1: All Claims

Report Format

Exhibit 6 shows the format for reporting utilization rates (and related payments) for medical services partitioned into broadly defined categories. In this example the statistics represent medical services received within the first 60 days of claim history, for claims with date of injury during January – December 1999.

Exhibit 6: Example of Utilization Report for 60-Day Claims

Number of claims: 11,307

	Category of Service [1]	Total Frequency [2]	Freq Per 1,000 Claims [3]	Payments Amount [4]	Payments % Dist [5]	Payments Per Claim [6]
1	Visits & Consults	64,838	5,734	$3,295,858	23%	$291
2	Emergency Services	9,338	826	$865,088	6%	$77
3	Physical Medicine	212,622	18,804	$4,562,880	31%	$404
4	Psychiatric Services	3,329	294	$342,567	2%	$30
5	Other Nonsurgical Services	7,978	706	$376,736	3%	$33
	Subtotal	298,106	26,364	$9,443,129	65%	$835
6	Musculoskeletal Surgery	1,279	113	$326,475	2%	$29
7	Neurosurgery	1,015	90	$222,849	2%	$20
8	Other surgery & anesthesia	1,360	120	$219,668	2%	$19
	Subtotal	3,654	323	$768,992	5%	$68
9	MRI/CT Scans	609	54	$292,044	2%	$26
10	Other Radiology	13,357	1,181	$537,783	4%	$48
	Subtotal	13,966	1,235	$829,828	6%	$73
11	Pharmacy	14,433	1,276	$404,960	3%	$36
12	Inpatient Room & Board	487	43	$1,201,069	8%	$106
13	Other Facility Charges	5,359	474	$545,750	4%	$48
14	Medical-Legal Services	1,746	154	$812,254	6%	$72
15	Special Services & Reports	26,532	2,346	$597,242	4%	$53
	Total	364,284	32,217	$14,603,224	100%	$1,292

Services within the first 60 days of claim history, claims with date of injury during January - December 1999.

Categories of Service

To aggregate frequency counts and payment amounts by category of service, each bill detail line in the Provider Billing File is mapped to a service category, based on the procedure code. Specifications for this mapping are given in Appendix 4.2.1.

The analysis uses only those bill detail lines for which the date of service is equal to or less than the date of injury plus 60 days.

Frequency

To calculate the frequency within each category of service, each bill detail line is counted as one. In some systems the Provider Billing File allows a "span" billing, so that one bill detail line may be used to represent iterations of the same service—for example, multiple physical therapy treatment visits during a calendar month. A quantity field is then used to indicate the number of services and this count should also be used to calculate frequency.

Column 2 in the table shows the frequency for each category of service. Column 3 shows the frequency per 1,000 claims—the value in Column 2 multiplied by 1,000, then divided by the number of claims.

Payments

Column 4 shows the amount actually paid for services in each category (not the amount charged by providers).

In some systems the Provider Billing File does not record the amount actually paid, but instead has only the "allowed" amount for each bill detail line—the amount determined to be the appropriate payment as a result of bill review. Claims administrators may over-ride the recommended allowed amount and actually pay more to the provider. However, this should rarely occur. It is acceptable to use the allowed amount for reporting if one additional total line is presented in the table—a line showing the total amount actually paid (all services combined) for services received during the first 60 days of claim history, based on the Payment File.

Column 5 shows the distribution of payment amounts among service categories. Column 6 shows the average payment per claim—the payment amount in Column 4 divided by the number of claims.

18-Month Claims

The reporting format shown in Exhibit 6 should also be used for the 18-month claim group—claims with date of injury during July 1997 – June 1997. In this case the services represented in the table should include all bill detail lines with date of service less than or equal to the date of injury plus 548 days (18 months).

Section 5.2: Selected Diagnosis Groups

The utilization reporting format shown above in Exhibit 6 can also be used for each of the eight diagnosis-based claim groups. Exhibit 7 is an example of such a table for the Low Back Pain Group A (No co-morbidity) subgroup, within the 60-day claim group.

Exhibit 7: Example of 60-Day Utilization Report for LBP Group A

Number of claims: 2,233

	Category of Service [1]	Total Frequency [2]	Freq Per 1,000 Claims [3]	Payments Amount [4]	Payments % Dist [5]	Payments Per Claim [6]
1	Visits & Consults	23,995	10,745	$1,177,122	21%	$527
2	Emergency Services	3,390	1,518	$299,840	5%	$134
3	Physical Medicine	90,091	40,345	$1,972,358	35%	$883
4	Psychiatric Services	1,563	700	$174,620	3%	$78
5	Other Nonsurgical Services	2,233	1,000	$97,851	2%	$44
	Subtotal	121,272	54,309	$3,721,791	66%	$1,667
6	Musculoskeletal Surgery	426	191	$51,653	1%	$23
7	Neurosurgery	792	355	$180,702	3%	$81
8	Other surgery & anesthesia	345	155	$55,624	1%	$25
	Subtotal	1,563	700	$287,979	5%	$129
9	MRI/CT Scans	284	127	$106,663	2%	$48
10	Other Radiology	3,979	1,782	$178,719	3%	$80
	Subtotal	4,263	1,909	$285,382	5%	$128
11	Pharmacy	5,989	2,682	$166,624	3%	$75
12	Inpatient Room & Board	142	64	$507,790	9%	$227
13	Other Facility Charges	1,523	682	$157,374	3%	$70
14	Medical-Legal Services	711	318	$341,548	6%	$153
15	Special Services & Reports	7,998	3,582	$190,322	3%	$85
	Total	143,460	64,245	$5,658,811	100%	$2,534

Services within the first 60 days of claim history, claims with date of injury during January - December 1999.

Since there are eight diagnosis groups for each of two claim groups (60-day claims and 18-month claims), there will be a total of 16 tables like this.

Section 6: Treatment Patterns for Selected Diagnosis Groups

The final set of measures describes selected elements of treatment patterns for each of the four diagnosis groups. Exhibit 8 demonstrates the treatment pattern measures for the Low Back Pain Group A, using claims selected for 60-day measures.

Exhibit 8: 60-Day Treatment Pattern Measures for LBP Group A

Number of claims: 2233

	Service Category [1]	First Week [2]	First Four Weeks [3]	Total [4]
A. Surgery				
1	Laminectomy - Lower Back			
2	Arthrodesis - Lower Back			
3	Injection	1.3%	1.5%	1.6%
4	Other Surgery of Spine			
5	Other Surgery	0.8%	0.8%	1.1%
6	*Any Surgery*	2.0%	2.2%	2.5%
B. Radiology				
7	Plain Films - Lower Back	29.9%	32.1%	34.0%
8	CT Scan - Lower Back	0.2%	0.3%	0.4%
9	MRI - Lower Back	2.3%	3.0%	4.3%
10	Other Rad of Spine	1.1%	1.3%	1.8%
11	Other Radiology	1.7%	2.2%	2.9%
12	*Any Radiology*	32.9%	35.6%	38.5%
C. Other Services				
13	Physical Medicine	37.0%	47.5%	51.1%
14	PT Modality	27.9%	35.6%	38.4%
15	Chiropractic	9.2%	10.7%	10.8%
16	Hospital Inpatient	0.1%	0.1%	0.1%
17	Emergency Room	12.7%	12.9%	13.1%

Column 1 lists the service categories for which statistics are to be calculated. In the surgery and radiology sections, the following categories are specific to the lower back region:

- Laminectomy
- Arthrodesis
- Plain Films
- CT Scan
- MRI

The other service categories listed in column 1 cannot be linked specifically with a region of the body, although by the nature of definition of this diagnosis group they are assumed to be related to lower back pain. Appendix 4.2.1lists the procedure codes that are to be used to define each of these service categories.

Column 2 in the table shows, for each of the column 1 service categories, the percent of claims that received one or more of those services during the first week after the date of injury. For example, line 9 in column 2 shows that 2.3% of the claims had an MRI of the lower back during the first week. "During the first week" means that the date of service was from the date of injury to the date of injury plus six days.

The number of claims used as the denominator for all of the percentages in the table is shown in the upper right-hand corner. In this example, the number is 2,233.

Column 3 shows similar statistics for services in the first four weeks—that is, from the date of injury to the date of injury plus 27 days. These percentages include all of the claims counted in column 2 (first week), plus any additional claims with services during weeks 2 – 4. In the case of the MRI statistic, the percentage has increased from 2.3% to 3.0%.

Column 4 shows the same percentages for all claims included in the analysis. Since we are considering the 60-day claim group, these percentages represent all services received in the first 60 days of claim history.

This same table should be produced for LBP Group B, in the 60-day claim group, and for both LBP Group A and LBP Group B in the 18-month claim group. For the two 18-month claims, column 4 will represent all services received in the first 18 months of claim history. Definitions of columns 2 and 3 will remain the same.

The Shoulder Group

Exhibit 9 illustrates the treatment pattern statistics to be calculated for the Shoulder Group A claims.

Exhibit 9: 60-Day Treatment Pattern Measures for Shoulder Group A

Number of claims: 984

	Service Category [1]	First Week [2]	First Four Weeks [3]	Total [4]
A. Surgery				
1	Excision - Shoulder			0.2%
2	Injection - Shoulder	1.6%	4.3%	9.3%
3	Rotator Cuff Repair			0.2%
4	Other Shoulder Repair			0.5%
5	Shoulder Arthroscopy			0.2%
6	Other Surgery	1.4%	1.8%	2.7%
7	*Any Surgery*	3.0%	6.1%	11.6%
B. Radiology				
8	Plain Films - Shoulder	33.0%	36.6%	38.2%
9	CT Scan - Upper Extrem			
10	MRI - Joint Upp Extrem	5.9%	6.6%	7.7%
11	Other Rad	10.0%	12.5%	14.8%
12	*Any Radiology*	44.3%	48.9%	51.1%
C. Other Services				
13	Physical Medicine	29.5%	42.7%	45.7%
14	PT Modality	23.4%	34.5%	36.8%
15	Chiropractic	5.2%	6.1%	6.4%
16	Hospital Inpatient			0.2%
17	Emergency Room	11.8%	11.8%	12.0%

Several of the service categories shown in column 1 are specific to shoulder injury; others are generic. Again, Appendix 4.2.1 contains explicit definition of each service category in terms of procedure codes. The definitions for columns 2, 3 and 4 are the same as for the Low Back Pain group. The same format should be used to report statistics for the Shoulder Group B claims within the 60-day claim group, and for Shoulder Group A and Shoulder Group B within the 18-month claim group.

The Knee Group

The same format is to be used for the Knee claims, as illustrated in Exhibit 10.

Exhibit 10: 60-Day Treatment Pattern Measures for Knee Group A

Number of claims: 235

	Service Category [1]	First Week [2]	First Four Weeks [3]	Total [4]
A. Surgergy				
1	Diagnostic Arthroscopy		1.4%	2.4%
2	Arthroscopic Surgery		0.5%	0.5%
3	Incision of Knee			0.5%
4	Partial Meniscectomy			
5	Complete Meniscectomy			
6	Other Excision of Knee			
7	Other Surgery	4.8%	4.8%	4.8%
8	*Any Surgery*	4.8%	5.7%	6.7%
B. Radiology				
9	Plain Films - Knee	57.1%	61.9%	61.9%
10	CT Scan Lower Extremity		0.5%	0.5%
11	MRI Joint Lower Extremity	1.0%	1.0%	2.4%
12	Other Radiology	0.5%	1.4%	2.4%
13	*Any Radiology*	58.1%	63.3%	65.7%
C. Other Services				
14	Physical Medicine	14.3%	23.8%	33.3%
15	PT Modality	11.4%	12.4%	13.3%
16	Chiropractic	4.8%	6.0%	6.2%
17	Hospital Inpatient			
18	Emergency Room	4.8%	4.8%	4.8%

Again, see Appendix 4.2.1 for procedure code lists that define the service categories in column 1. The same format is to be used for Knee Group B, and for Knee Group A and Knee Group B within the 18-month claim group.

The Forearm, Wrist, Hand Group

Exhibit 11 shows the treatment pattern report for FWH Group A.

Exhibit 11: 60-Day Treatment Pattern Measures for FWH Group A

Number of claims: 1,802

	Service Category [1]	First Week [2]	First Four Weeks [3]	Total [4]
A. Surgery				
1	Carpal Tunnel Release	0.4%	0.6%	0.7%
2	Injection Therapy	1.5%	2.0%	3.8%
3	Other Surgery	3.8%	4.5%	5.8%
4	*Any Surgery*	5.5%	6.6%	9.7%
B. Radiology				
5	Plain Film - FWH	33.0%	34.5%	36.6%
6	CT Scan Upper Extremity	0.1%	0.1%	0.1%
7	MRI Joint Upper Extremity	0.1%	0.1%	0.2%
8	Other Radiology	1.1%	1.2%	2.1%
9	*Any Radiology*	34.0%	35.5%	37.6%
C. Other Services				
10	Nerve Conduction Study	1.4%	2.4%	4.0%
11	Physical Medicine	21.7%	34.1%	39.0%
12	PT Modality	13.6%	22.5%	26.6%
13	Chiropractic	6.1%	6.9%	7.0%
14	Hospital Inpatient	0.1%	0.1%	0.1%
15	Emergency Room	6.3%	6.5%	6.6%

Appendix 4.2.1 has the procedure code lists that define each of the service categories. The same report should be created for the other three FWH groups: FWH Group A within 60-day claims, and FWH Group A and FWH Group B within the 18-month claim group.

Physical Medicine Encounters

Physical medicine plays an important role for all types of "sprain and strain" injury. The next report format is a simple one, designed to show the relative frequency with which physical medicine encounters occurred for each of the eight diagnosis groups. The format is shown in Exhibit 12.

Exhibit 12: Distribution of 60-Day Claims by Number of Physical Medicine Encounters

Number of	LBP		Shoulder		Knee		FWH	
PM Visits [1]	Grp A [2]	Grp B [3]	Grp A [4]	Grp B [5]	Grp A [6]	Grp B [7]	Grp A [8]	Grp B [9]
None	52%	35%	54%	34%	72%	67%	61%	45%
1-5	24%	23%	22%	25%	19%	12%	21%	19%
6-10	13%	19%	15%	22%	6%	12%	12%	22%
11-15	6%	12%	5%	12%	1%	5%	3%	10%
16-20	2%	7%	1%	5%	2%	3%	1%	3%
21+	2%	5%	2%	2%	0%	1%	1%	1%
	100%	100%	100%	100%	100%	100%	100%	100%

In this context, an "encounter" means a unique combination of claim, provider and date of service. A physical medicine encounter is one billed with one or more procedure codes in the CPT range 97001 – 97799; or, for facility bills, with a revenue code in the range 420 – 424. The report should be prepared for each of the two claim groups: 60-day claims and 18-month claims.

Radiology Encounters

The final report (Exhibit 13) uses a similar format to show the distribution of claims by number of radiology encounters, for each of the eight diagnosis groups.

Exhibit 13: Distribution of 60-Day Claims by Number of Radiology Encounters

Number of	LBP		Shoulder		Knee		FWH	
Rad Enc	Grp A	Grp B	Grp A	Grp B	Grp A	Grp B	Grp A	Grp B
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
None	66%	45%	56%	52%	47%	46%	63%	57%
One	29%	35%	35%	32%	44%	32%	32%	26%
Two	4%	15%	7%	14%	9%	14%	4%	14%
Three +	1%	5%	2%	3%	0%	9%	1%	3%
	100%	100%	100%	100%	100%	100%	100%	100%

A radiology encounter is one billed with one or more procedure codes in the CPT range 70000 – 79999; or, for facility bills, codes in one of the following ranges:

320-329	Radiology
350-352	CT Scan
610-619	MRI

The report should be prepared for both 60-day claims and 18-month claims.

Section 8: Summary

The administrative measures defined here require a total of 44 reports. However, these reports use only eight different formats. Multiple reports for most of the formats are generated by using different claim groups—the 60-day and 18-month claim groups and/or the eight diagnosis groups.

Exhibit 14 recapitulates the reports for each of the eight formats, and shows the exhibits that illustrate each format.

Exhibit 14: Recapitulation of Formats and Reports

			Claim Groups		Diagnosis Groups				Number of
	Report Format	Exhibits	60D	18M	LBP	Shld	Knee	FWH	Reports
	[1]	[2]	[3]	[4]	[6]	[7]	[8]	[9]	[10]
1	Benefit Cost	1, 2	X	X					2
2	Benefit Cost by Dx Grp	3	X	X	One for Grp A, One for Grp B				2
3	Case Management	4	One for both						1
4	Return to Work	5	One for both						1
5	Utilization and Cost	6, 7	X	X	A,B	A,B	A,B	A,B	18
6	Treatment Patterns	8 - 11	X	X	A,B	A,B	A,B	A,B	16
7	Phys Med Frequency	12	X	X	All in same report				2
8	Radiology Frequency	13	X	X	All in same report				2
									44

Additional documents provide detailed specifications to be used for the following definitions:

Appendix 3: Diagnosis Groups

Appendix 4.2.1: Service Categories for Utilization and Cost Reports and Definition of Categories of Service for Treatment Patterns Reports.

Definition of Categories of Service For Utilization and Cost Reporting

This attachment shows how to map procedure codes into categories of service for the purpose of utilization and cost reporting, based on data from the Provider Billing File.

Categories of Service

Following are the categories of service:

Exhibit App4.2.1-1: Categories of Service

1	Visits & Consults
2	Emergency Services
3	Physical Medicine
4	Psychiatric Services
5	Other Nonsurgical Services
6	Musculoskeletal Surgery
7	Neurosurgery
8	Other surgery & anesthesia
9	MRI/CT Scans
10	Other Radiology
11	Pharmacy
12	Inpatient Room & Board
13	Other Facility Charges
14	Medical-Legal Services
15	Special Services & Reports
16	Other Services

Procedure Code Systems

The dominant coding system for billing professional services is Current Procedure Terminology, Fourth Edition, commonly referred to as CPT-4. The official version of CPT is maintained by the American Medical Association. In practice, the use of CPT codes for workers compensation provider bill adjudication is often commingled with one or more of the following code systems:

1. HCFA's Common Procedure Coding System (HCPCS). HCPCS, required for Medicare billing, incorporates CPT codes supplemented by other codes to cover DME, prosthetic devices, injectables, surgical supplies, and some services not explicitly coded in CPT.

2. Revenue codes developed for use on the UB92 uniform hospital billing form. In workers compensation systems these may be used for hospital inpatient and outpatient facility charges, and also for clinics and surgery centers.

3. National Drug Codes (NDC) for pharmaceuticals.

4. ICD-9 procedure codes for hospital inpatient bills.

The following sections have specifications for mapping from each of these procedure coding systems into the service categories shown in Exhibit App4.2.1-1.

Nonstandard procedure codes may be used in some systems—that is, codes that are not found in any of the code system listed above. Correct mapping of these codes into the service categories must be left to the information technicians who work with these systems.

CPT Codes

Exhibit App4.2.1-2 shows the mapping of CPT codes into the service categories.

Exhibit App4.2.1-2: CPT Code Mapping to Service Categories

Code Range		Report Category	
From [1]	To [2]	Code [3]	Description [4]
00001	19999	8	Other Surgery & Anesthesia
20000	29999	6	Musculoskeletal Surgery
30000	60699	8	Other Surgery & Anesthesia
61000	62273	7	Neurosurgery
62274	62279	8	Other Surgery & Anesthesia
62280	64999	7	Neurosurgery
65091	69979	8	Other Surgery & Anesthesia
70000	70335	10	Other Radiology
70336	70336	9	MRI/CT
70337	70449	10	Other Radiology
70450	70492	9	MRI/CT
70493	70549	10	Other Radiology
70540	70553	9	MRI/CT
70554	71249	10	Other Radiology
71250	71270	9	MRI/CT
71271	71549	10	Other Radiology
71550	71555	9	MRI/CT
71556	72124	10	Other Radiology
72125	72133	9	MRI/CT
72134	72140	10	Other Radiology
72141	72159	9	MRI/CT
72160	72191	10	Other Radiology
72192	72196	9	MRI/CT
72197	72197	10	Other Radiology
72198	72198	9	MRI/CT
72199	73199	10	Other Radiology
73200	73202	9	MRI/CT
73203	73219	10	Other Radiology
73220	73225	9	MRI/CT

Exhibit App4.2.1-2, continued

Code Range		Report Category	
From	To	Code	Description
[1]	[2]	[3]	[4]
73224	73699	10	Other Radiology
73700	73702	9	MRI/CT
73703	73719	10	Other Radiology
73720	73725	9	MRI/CT
73726	74149	10	Other Radiology
74150	74170	9	MRI/CT
74171	74180	10	Other Radiology
74181	74185	9	MRI/CT
74186	75551	10	Other Radiology
75552	75556	9	MRI/CT
75557	76092	10	Other Radiology
76093	76094	9	MRI/CT
76095	76354	10	Other Radiology
76355	76370	9	MRI/CT
76371	76379	10	Other Radiology
76380	76380	9	MRI/CT
76381	76389	10	Other Radiology
76390	76400	9	MRI/CT
76401	79999	10	Other Radiology
80002	89999	5	Other Nonsurgical Services
90000	90799	5	Other Nonsurgical Services
90801	90899	4	Psychiatric Services
90900	96999	5	Other Nonsurgical Services
97000	98943	3	Physical Medicine
99000	99199	15	Special Services & Reports
99200	99275	1	Visits & Consults
99281	99285	2	Emergency Services
99288	99499	1	Visits & Consults
99900	99909	5	Other Nonsurgical Services

HCPCS

Most HCPCS codes should be Category 16, Other Services. The exceptions are the following:

1. Code A2000 should be mapped to Category 3, Physical Medicine.

2. Codes in the ranges G0071-G0094 and H5010-H5025 should be mapped to Category 4, Psychiatric Services.

3. Codes in the range Q0069-Q0072 should be mapped to Category 9, MRI/CT.

Revenue Codes

Exhibit App4.2.1-3 shows the mapping of revenue codes to Service Categories.

Exhibit App4.2.1-3: Revenue Code Mapping to Categories of Service

Code Range		Report Category	
From [1]	To [2]	Code [3]	Description [4]
003	239	12	Inpatient Room & Board
240	240	13	Other Facility Charges
250	259	11	Pharmacy
260	369	13	Other Facility Charges
370	370	8	Other Surgery & Anesthesia
380	419	13	Other Facility Charges
420	424	3	Physical Medicine
429	440	13	Other Facility Charges
450	459	2	Emergency Services
460	623	13	Other Facility Charges
630	636	11	Pharmacy
700	720	12	Inpatient Room & Board
730	999	13	Other Facility Charges

NDC Codes

All NDC codes should be mapped to Category 11, Pharmacy.

ICD-9 Procedure Codes

All ICD-9 procedure codes should be mapped to Category 8, Other Surgery & Anesthesia, with the following two exceptions:

1. Codes in the range 01 to 05 should be mapped to Category 7, Neurosurgery.

2. Codes in the range 76 to 84 should be mapped to Category 6, Musculoskeletal Surgery.

Attachment 3: Definition of Categories of Service For Treatment Pattern Reporting

This attachment will provide mappings from procedure codes into the categories of service that are used in the four formats to be used for treatment pattern reports. There is one format for each of the four diagnosis groups, as illustrated in Exhibit 9 – 12 in the body of the report.

Common Categories

There are some categories of service that are common to all four report formats. These are the following:

- Surgery
- Radiology
- Physical Medicine
- Chiropractic Services
- Hospital Inpatient
- Emergency Room

Following are definitions for each of these six categories:

1. **Surgery**

   The objective is to arrive at an unduplicated count of recipients of any type of surgery, so any procedure code that indicates surgery will qualify, including anesthesia codes. With CPT codes, use any code with value less than 70000. Any ICD-9 procedure codes would also qualify. With revenue codes, use any of the following ranges:

360-369	Operating room services
370-379	Anesthesia
710-719	Recovery room
963-964	Professional fees for anesthesia

2. **Radiology**

   With CPT codes, use the range 70000 – 79999. With revenue codes, use any of the following ranges:

320-329	Radiology
350-352	CT Scan
610-619	MRI

3. **Physical Medicine**

   With CPT codes, use the range 97001 – 97799. With revenue codes, use the range 420-424, Physical Therapy.

4. **Chiropractic Services**

   Chiropractic services are identified by CPT codes 98940 – 98943. In some systems it may be necessary to use the provider type to identify chiropractic services.

5. Hospital Inpatient

In the CPT Evaluation and Management Section, the following code ranges represent hospital inpatient services:

99221-99236 Visits, observation and admission and discharge services
99251-99263 Inpatient consultations

With revenue codes, the range from 100 to 209 can be used. This range includes room and board charges, and ICU charges.

In some systems, a place of service code identifies hospital inpatient services.

6. Emergency Room

CPT codes in the range 99281 – 99285 are used for emergency department services.

Revenue codes 450 – 459 are for ER charges and revenue code 981 is for professional charges for ER services.

In some systems, a place of service code also identifies ER services.

The Low Back Pain Group

Following are service categories specific to the Low Back Pain treatment pattern format (Exhibit 9 in the body of this report):

Laminectomy – Lower Back (line 1)
Arthrodesis – Lower Back (line 2)
Injection (line 3)
Other surgery of spine (line 4)
Plain Films – Lower Back (line 7)
CT Scan – Lower Back (line 8)
MRI – Lower Back (line 9)
Other Radiology of Spine (line 10)

Exhibit App4.2.1-4 on the following page shows the mapping of CPT codes into these categories.

Note that line 5, Other Surgery, on the report is a default category. That is, it should count all claims with surgery (as defined above) who are not counted in any of lines 1 –4. Line 6, Any Surgery, should be based on an unduplicated count of all claims with surgery.

Similarly, line 11, Other Radiology, should count all claims with radiology who are not counted in any of lines 7 – 10. Line 12 counts all claims with radiology.

Exhibit App4.2.1-4: CPT Code Mapping for LBP Service Categories

Code Range		Report Line	
From [1]	To [2]	Number [3]	Label [4]
00600	00670	4	Other Surgery of Spine
22100	22116	4	Other Surgery of Spine
22210	22226	4	Other Surgery of Spine
22305	22328	4	Other Surgery of Spine
22505	22505	4	Other Surgery of Spine
22548	22557	4	Other Surgery of Spine
22558	22585	2	Arthrodesis
22590	22611	4	Other Surgery of Spine
22612	22612	2	Arthrodesis
22613	22629	4	Other Surgery of Spine
22630	22630	2	Arthrodesis
22631	22632	4	Other Surgery of Spine
22800	22819	4	Other Surgery of Spine
22820	22820	4	Other Surgery of Spine
22830	22830	4	Other Surgery of Spine
22840	22855	4	Other Surgery of Spine
22899	22899	4	Other Surgery of Spine
27280	27280	2	Arthrodesis
27281	27286	4	Other Surgery of Spine
62268	62298	3	Injection
62350	62350	4	Other Surgery of Spine
62351	62351	1	Laminectomy
62352	62355	4	Other Surgery of Spine
62360	62368	4	Other Surgery of Spine
63001	63004	4	Other Surgery of Spine
63005	63005	1	Laminectomy
63006	63010	4	Other Surgery of Spine
63011	63012	1	Laminectomy
63013	63016	4	Other Surgery of Spine
63017	63017	1	Laminectomy
63020	63029	4	Other Surgery of Spine
63030	63030	1	Laminectomy
63031	63041	4	Other Surgery of Spine
63042	63042	1	Laminectomy
63045	63046	4	Other Surgery of Spine
63047	63047	1	Laminectomy
63048	63048	4	Other Surgery of Spine
63055	63091	4	Other Surgery of Spine
63170	63173	1	Laminectomy
63174	63184	4	Other Surgery of Spine
63185	63185	1	Laminectomy
63186	63190	4	Other Surgery of Spine
63191	63191	1	Laminectomy
63192	63193	4	Other Surgery of Spine
63194	63194	1	Laminectomy

Code Range		Report Line	
From [1]	To [2]	Number [3]	Label [4]
63195	63199	4	Other Surgery of Spine
63200	63200	1	Laminectomy
63201	63251	4	Other Surgery of Spine
63252	63252	1	Laminectomy
63253	63266	4	Other Surgery of Spine
63267	63267	1	Laminectomy
63268	63271	4	Other Surgery of Spine
63272	63272	1	Laminectomy
63273	63276	4	Other Surgery of Spine
63277	63277	1	Laminectomy
63278	63281	4	Other Surgery of Spine
63282	63282	1	Laminectomy
63283	63286	4	Other Surgery of Spine
63287	63287	1	Laminectomy
63288	63290	4	Other Surgery of Spine
63300	63308	4	Other Surgery of Spine
63600	63615	4	Other Surgery of Spine
63650	63688	4	Other Surgery of Spine
63700	63710	4	Other Surgery of Spine
63740	63746	4	Other Surgery of Spine
63780	63780	4	Other Surgery of Spine
64400	64439	4	Other Surgery of Spine
64440	64443	3	Injection
64444	64450	4	Other Surgery of Spine
64505	64519	4	Other Surgery of Spine
64520	64520	3	Injection
64521	64530	4	Other Surgery of Spine
72010	72020	7	Plain Film - Lower Back
72040	72050	10	Other Rad of Spine
72069	72069	7	Plain Film - Lower Back
72070	72074	10	Other Rad of Spine
72080	72120	7	Plain Film - Lower Back
72125	72130	10	Other Rad of Spine
72131	72133	8	CT Scan - Lower Back
72141	72147	10	Other Rad of Spine
72148	72149	9	MRI - Lower Back
72156	72157	10	Other Rad of Spine
72158	72159	9	MRI - Lower Back
72170	72190	7	Plain Film - Lower Back
72192	72194	8	CT Scan - Lower Back
72196	72198	9	MRI - Lower Back
72200	72220	7	Plain Film - Lower Back
72240	72295	10	Other Rad of Spine
76800	76800	10	Other Rad of Spine
90782	90784	3	Injection

The Shoulder Group

The treatment pattern format for the Shoulder group (Exhibit 10) has the following service categories specific to this group:

Excision – Shoulder
Injection – Shoulder
Rotator Cuff Repair
Other Shoulder Repair
Shoulder Arthroscopy
Plain Films – Shoulder
CT Scan – Upper Extremity
MRI – Join of Upper Extremity

Exhibit App4.2.1-5 shows the CPT code mapping for these categories.

Exhibit App4.2.1-5: CPT Code Mapping for Shoulder Service Categories

Code Range		Report Line	
From [1]	To [2]	Number [3]	Label [4]
20550	20610	2	Injection - Shoulder
23065	23222	1	Excision - Shoulder
23350	23350	2	Injection - Shoulder
23395	23409	4	Other Shoulder Repair
23410	23412	3	Rotator Cuff Repair
23415	23491	4	Other Shoulder Repair
29815	29826	5	Shoulder Arthroscopy
73020	73040	8	Plain Film - Shoulder
73200	73202	9	CT Scan - Upper Extremity
73221	73221	10	MRI - Joint Upper Extremity

As with the Back group, the "Other Surgery" and "Other Radiology" categories are defined by default.

The Knee Group

The treatment pattern report for the Knee group (Exhibit 11) has the following service categories specific to this group:

Diagnostic Arthroscopy
Arthroscopic Surgery
Incision of Knee
Partial Meniscectomy
Complete Meniscectomy
Other Excision of Knee
Plain Films – Knee
CT Scan of Lower Extremity
MRI Joint of Lower Extremity

Exhibit App4.2.1-6 shows the mapping of CPT codes into these categories.

Exhibit App4.2.1-6: CPT Code Mapping for Knee Service Categories

Code Range		Report Line	
From	To	Number	Label
[1]	[2]	[3]	[4]
27301	27303	3	Incision of Knee
27310	27310	3	Incision of Knee
27323	27331	6	Other Excision of Knee
27332	27332	4	Partial Meniscectomy
27333	27333	5	Complete Meniscectomy
27334	27350	6	Other Excision of Knee
27365	27365	6	Other Excision of Knee
29870	29870	1	Diagnostic Arthroscopy
29871	29889	2	Arthroscopic Surgery
73560	73580	9	Plain Film - Knee
73700	73702	10	CT Scan of Lower Extremity
73721	73721	11	MRI of Joint of Lower Extremity

The Forearm-Wrist-Hand Group

Following are the service categories specific to the Forearm-Wrist-Hand group (Exhibit 12):

Carpal Tunnel Release
Injection Therapy
Plain Films – FWH
CT Scan of Upper Extremity
MRI of Join of Upper Extremity
Nerve Conduction Study

Exhibit App4.2.1-7 shows the CPT code mapping for these categories.

Exhibit App4.2.1-7: CPT Code Mapping for Forearm-Wrist-Hand Service Categories

Code Range		Report Line	
From	To	Number	Label
[1]	[2]	[3]	[4]
20550	20605	2	Injection Therapy
64721	64721	1	Carpal Tunnel Release
73050	73140	5	Plain Film - FWH
73200	73202	6	CT Scan Upper Extremity
73221	73221	7	MRI Joint Upper Extremity
95900	95904	10	Nerve Conduction Study

Appendix 4.3

Record Review for Clinical Quality

The record review provides workers' compensation managed care plans with information about the *initial* management of 4 common, non-traumatic worker injuries: low back pain/strain, shoulder injury, wrist/hand injury, and knee injury. The review focuses on occupational and medical history taking, physical exam, work restrictions, patient education and selected treatment patterns.

A review of the clinical literature indicates consensus that appropriate management of occupational injuries, as well as attribution of work-relatedness, is dependent on the provider conducting the proper history and physical exam. These measures enable the network to assess the quality of management during the initial clinical encounter. Review of literature supporting specific clinical interventions revealed less consensus about when to carry out certain clinical interventions, if at all. The interventions assessed in this chart audit protocol are only those with clear evidence for efficacy. The MCO can use information on the process and content of clinical interactions for quality improvement initiatives and for feedback and education to workers' compensation network providers.

The sampling procedure uses the same groupings of injuries identified for other types of performance measures (survey and claims data measures). See Appendix 3 for a complete discussion of grouping injuries into categories with common treatment patterns.

MCOs will use claims data to identify cases for review, after which the MCO will request complete documentation of initial clinical encounters from the provider office. Reviews should be carried out by trained chart reviewers (preferably registered nurses) in conjunction with a procedure to verify inter-rater reliability. The MCO should ensure that confidential worker medical information is protected during the review process.

Analysis and Reporting

Data reports will be presented as the percent of medical records that meet criteria for each indicator. Results will be reported as conformance (or compliance) scores. That is, the questions are dichotomous (either the provider did or did not document the required activity. Findings are presented as a report of the percentage of cases in which documentation was identified. Subgroup analysis can be reported by injury type.

Mock Data Table: Performance on Appropriateness Measures

	Overall Score	**Score by Injury Type**			
		Low back pain	**Shoulder**	**Knee**	**Hand, wrist & forearm**
Adequate medical history	80%	76%	82%	78%	81%
Occupational risk assessment					
Appropriate focused physical exam					
Appropriate activity modification					
Appropriate work restrictions					
Attempt to place on modified duty					
Appropriate patient education					
Re-assessment if injury unimproved					

The documentation provided in the remainder of this appendix includes a tool for auditing medical records, and specific instructions for medical records auditors.

Sample Determination

Case finding period:	July 1, 1999 through December 31, 1999 (or analogous reporting year)
Index event:	Date of Injury (DOI) during the case finding period
Inclusion criteria:	See Figure 1 – Case Finding Procedure • Injury in one of four categories: low back pain, shoulder injury, knee injury, hand/wrist injury (see Figure 2 and Appendix 3) • At least one visit to the MCO on or after the index event (DOI) • First visit to MCO less than or equal to 4 weeks after the date of injury • Age at DOI greater than or equal to age 18 and less than age 65
Sample size:	15 cases per injury type (60 total)
Record request: **(from providers – request may be by mail or phone. Providers should have specific deadline for submitting records. The MCO may reimburse for records per its internal policy.)**	All visits from date of injury through 8 weeks later. Documentation to include, but not limited to: ◦ Visit notes ◦ Any flow or tracking sheets (if used for injury) ◦ Medication lists and orders ◦ Any consultation or referral requests (including other physicians, PT, OT) ◦ Imaging requests and reports of completed studies ◦ Problem lists ◦ Correspondence with employer (including work restriction notes, RTW notes, etc.) ◦ Correspondence with case manager

Figure 1
Case Finding Procedure

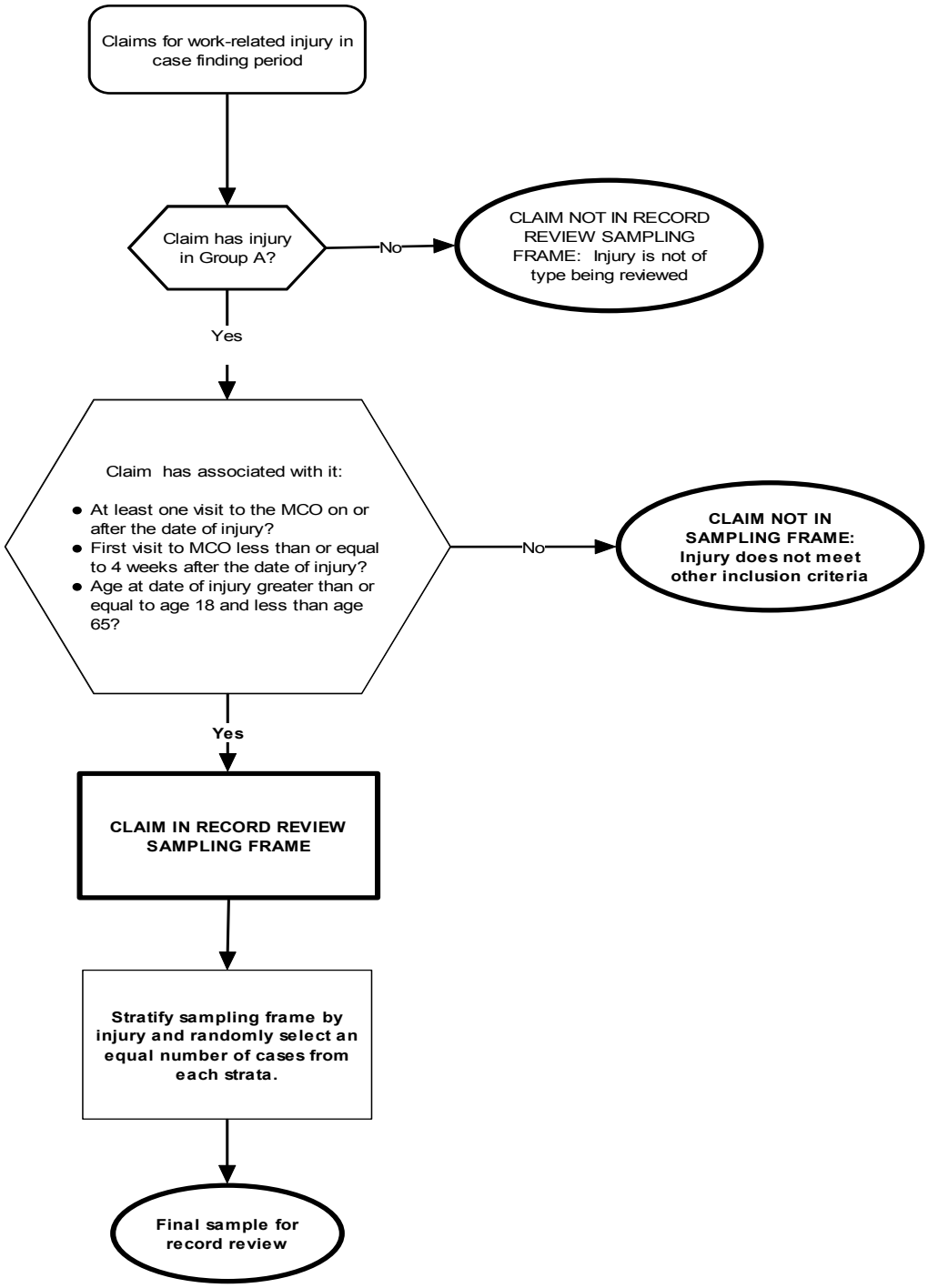
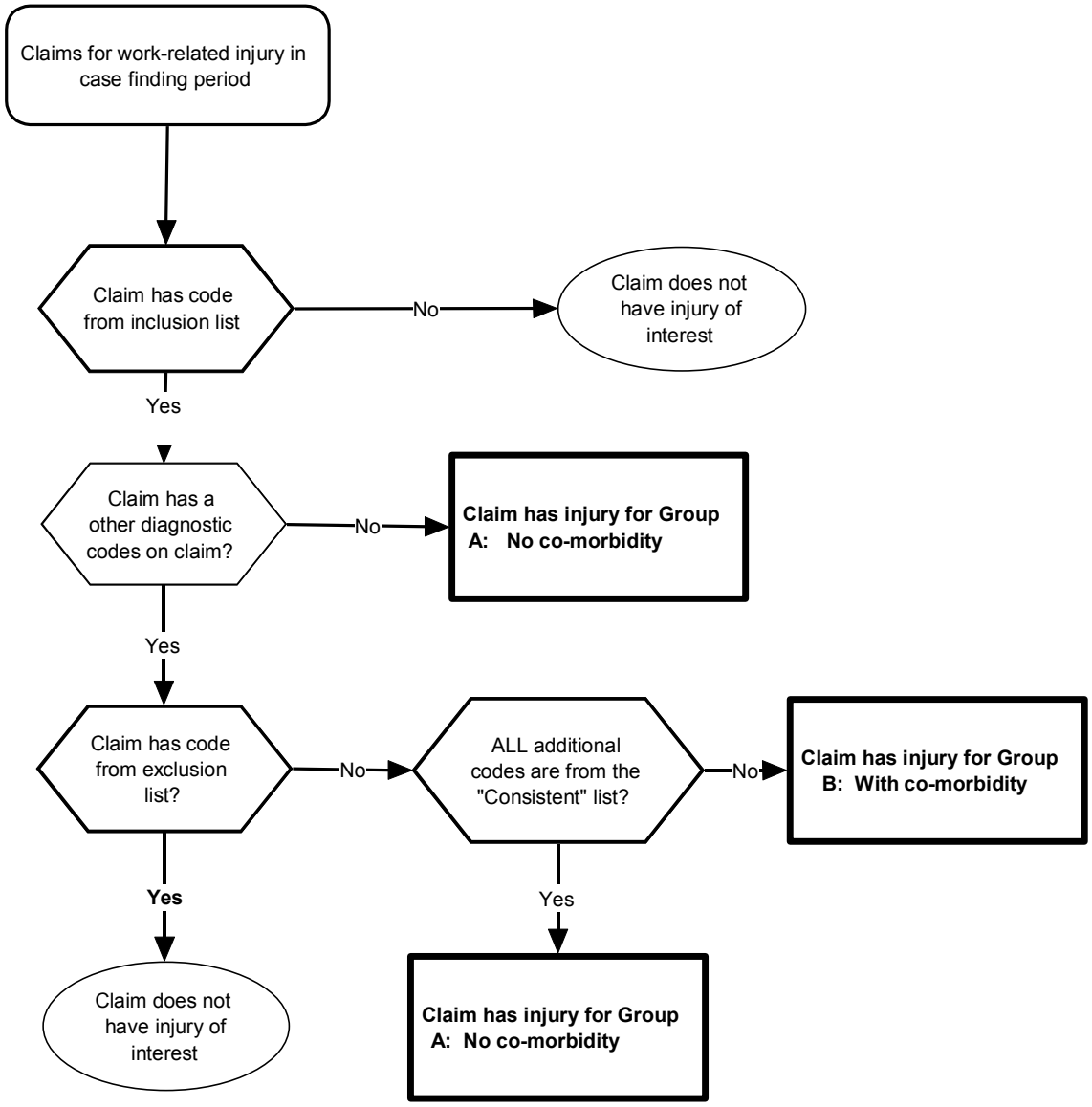


Figure 2
Case Finding Procedure



Medical Record Abstracting Form for Workers Compensation Measures

Section 1. Injury and Job Information

Data Item	Coding Options/Instructions	Data Entry
1. Worker's date of birth **WDOB**	Enter the worker's date of birth in mm/dd/yyyy format. If the date of birth is not documented, enter 11/11/1111.	__ __ / __ __ / __ __ __ __
2. Date of injury **DOI**	Compare the date of injury (DOI) from the review sticker with the DOI documented in the medical record. If the dates are the same, enter the date in mm/dd/yyyy format. If the dates are different, enter the DOI from the record in mm/dd/yyyy.	__ __ / __ __ / __ __ __ __
3. Type of injury **TINJ**	1= low back 2= shoulder 3= knee 4= forearm, wrist or hand 5= other – **ENTER 5 AND STOP ABSTRACTING**	__
4. Description of injury **DESC**	Enter the description of the injury documented in the record.	_____ _____
5. Type of job **TJOB**	01= Executive, managerial or professional 02= Technical 03= Outside sales 04= Administrative support 05= Material handler, laborer 06= Service (including retail sales) 07= Craft and repair 08= Operatives and fabricator 09= Farming, forestry or fishing 10= Protective service 11= Driver 12= Other 99= Type of job not documented	__ __
6. Type of job: Other **TOTH**	Enter the type of job if Question 5 was coded 12= Other. If the type of job was not coded 12, enter XXX.	_____ _____
7. Physician determination of work-relatedness of the injury **WKREL**	1=said to be work-related 3=said to be possibly work-related 2=said to be non-work-related 9=no mention of work-relatedness	__
8. Date of first visit after date of injury **VDAT1**	Enter the date of the first visit <u>after</u> the date of injury (DOI) in mm/dd/yyyy format.	__ __ / __ __ / __ __ __ __
9. Date of second visit after date of injury **VDAT2**	Enter the date of the second visit after the date of injury (DOI) in mm/dd/yyyy format. If no second visit is documented, enter 11/11/1111.	__ __ / __ __ / __ __ __ __

Affix ID label here

Section 1. Injury and Job Information (continued)

Data Item	Coding Options/Instructions	Data Entry
10. Date 4 weeks after date of injury DOI4W	Calculate the date 4 calendar weeks after the date of injury and enter it in mm/dd/yyyy format.	__ __ / __ __ / __ __ __ __
11. Is the date of the first visit more than 4 weeks after the date of injury? V1DOI	1=yes – **ENTER 1 and STOP ABSTRACTING** 2=no	__
12. Is the date of second visit more than 4 weeks after the date of injury? V2DOI	1=yes 2=no	__

For Sections 2-7:

- **If Q11=2 and Q12=2 (both 1st and 2nd visits are within 4 weeks after the DOI)**
  → **Use documentation from 1st and 2nd visits after the DOI PLUS any communications or correspondence between the 1st and 2nd visits after the DOI.**
- **If Q12=1 (2nd visit is more than 4 weeks post injury)**
  → **Use documentation from the 1st visit ONLY PLUS any communications or correspondence between the 1st visit and the date in Q10.**

For Section 8:

- **Use ALL visits and documentation between the 1st visit and the date in Q10.**

For Section 9:

- **Use ALL visits and documentation between the date in Q10 and the end of the record.**

For All Sections:

- **Do not consider information from another clinic, physician or Emergency Department visit prior to the date of first visit to the MCO.**

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2. Occupational Requirements (based on documentation in the first 4 weeks after date of injury)

For each item, code: **1= documented as present**
2= documented as negative
9= not documented

WORKER'S JOB REQUIRES:			
☐	Forceful, repetitive pinch grip **PINCH**	☐	Exposure to lower extremity vibration **LEVIB**
☐	Repetitive hand, wrist or forearm motions **REPH**	☐	Driving **DRIVE**
☐	Repetitive overhead work **OVER**	☐	Bending or twisting **BNDTW**
☐	Constrained postures **POST**	☐	Twisting under load **TWISLD**
☐	Kneeling **KNEEL**	☐	Other physical requirements, not listed above **OTHER**
☐	Lifting → **LIFT**		**IF** lifting is coded '1', does the record state: (Code 1 if documented, code 9 if not mentioned)
☐	Forceful movements **FORCE**	☐	How often lifting is required **LFTFRQ**
☐	Exposure to whole body vibration **WBVIB**	☐	Approximate weight of the lifted load **LODWT**
☐	Exposure to upper extremity vibration **UEVIB**	☐	Lifting position required **LFTPOS**
OTHER DOCUMENTATION			
☐	The worker had psychosocial job issues **ISSUE**	☐	The worker had employment-related issues **PSYCO**

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Section 3. Medical History and Current Complaint (based on documentation in the first 4 weeks after date of injury)

For each item, code: **1= documented as present**
2= documented as negative
9= not documented

	MEDICAL HISTORY		CURRENT COMPLAINT
☐	Immunosuppression IMMUN	☐	Onset of complaint ONSET
☐	Fever, chills FEVER	☐	Duration of complaint DURAT
☐	Symptoms of urinary or other infection SXUTI	☐	What makes the problem better or worse WORSE
☐	Painful, swollen joints (other than site of injury) SWOJT	☐	Specific location of complaint SPECLO
☐	Painful, **red**, swollen areas (other than site of injury) SWOTH	☐	Previous occurrences of complaint PRVDN
☐	Recent history of unexplained weight loss WTLOS	☐	Previous treatment of complaint and results of treatment PRVTX
☐	History of diabetes HXDM	☐	Trauma, said to be acute TRAU1
☐	Weakness WEAKN	☐	Trauma, said to be cumulative TRAU2
☐	History of peripheral vascular disease HXVAS	☐	Trauma, not specified as acute or cumulative TRAU3
☐	IV drug use IVDRU	☐	Point pain or tenderness PTPAN
☐	Rapidly growing, painful mass MASS	☐	Numbness or parasthesias NUMBN
☐	History of cancer HXCAN	☐	History of deformity or dislocation HXDISL
☐	Obesity OBESE	☐	Inability to use hand, wrist or digits INHAN
☐	Medical history said to be negative or non-contributory NOHX	☐	Painful, swollen knee or prepatellar area KNEEP
		☐	Inability to use knee joint KNEJT

Affix ID label here

Section 4. Physical Examination (based on documentation in the first 4 weeks after date of injury)

Complete only one column from the table, corresponding to the worker's type of injury.

For the column selected, code each item: 1= assessment documented
9= assessment not documented

FOREARM, WRIST, HAND		KNEE		LOW BACK		SHOULDER	
☐	General description of forearm, wrist or hand **DESC1**	☐	General description of knee **DESC2**	☐	General description of back **DESC3**	☐	General description of shoulder **DESC4**
☐	Palpation of forearm, wrist or hand **PALP1**	☐	Palpation of knee **PALP2**	☐	Palpation of back **PALP3**	☐	Palpation of shoulder **PALP4**
☐	Range of motion of affected area **ROM1**	☐	Range of motion of knee **ROM2**			☐	Range of motion of shoulder **ROM4**
☐	Sensory assessment with pinprick, light touch **SENS1**			☐	Testing of light touch sensation in foot **SENS3**	☐	Sensory assessment with pinprick, light touch **SENS4**
☐	Testing of bicep, tricep or brachioradialis reflexes **REFL1**	☐	Testing of knee and ankle reflexes **REFL2**	☐	Testing of ankle reflexes **REFL3**		
☐	Wrist pulses **PULS1**	☐	Pulses at groin, knee and ankle **PULS2**				
☐	Assessment of motor strength in forearm, wrist or hand **STRN1**			☐	Testing of dorsiflexion strength of ankle and great toe **STRN3**	☐	Motor strength in shoulder **STRN4**
☐	Testing Tinel's and/or Phalen's signs **TINPH**	☐	Knee Ligament testing **LIGTST**	☐	Straight leg raising test **SLRTST**		

Affix ID label here

Section 5. Activity Modifications (based on documentation in the first 4 weeks after date of injury)

Complete only one column from the table, corresponding to the worker's type of injury.

Code: 1= recommendation documented
9= not documented

FOREARM, WRIST, HAND		KNEE		LOW BACK		SHOULDER	
☐	Documentation that activity modification is not required – **CODE 1 AND SKIP TO NEXT PAGE** **ACTMD1**	☐	Documentation that activity modification is not required – **CODE 1 AND SKIP TO NEXT PAGE** **ACTMD2**	☐	Documentation that activity modification is not required – **CODE 1 AND SKIP TO NEXT PAGE** **ACTMD3**	☐	Documentation that activity modification is not required – **CODE 1 AND SKIP TO NEXT PAGE** **ACTMD4**
☐	Reduction of pinch grip or grasping **REDPI**	☐	Avoid work under load **AVWUL**	☐	Initiate or maintain non-stressful aerobic activity **NSAER**	☐	No overhead work **NOOVR**
☐	Reduction of repetitive motions **RDREP**	☐	Knee immobilization **KNEIM**	☐	Recommendation NOT to stay in bed >2 days **NOBED**	☐	Progressive range of motion exercises **PROM2**
☐	Progressive range of motion exercises **PROM1**	☐	Partial weight bearing **PWBRG**	☐	Avoid bending or stooping **AVBND**	☐	Gradual increase in aerobic activity **IAECA**
☐	Gradual increase in aerobic activity **INAER**	☐	Non-weight bearing ROM exercises **NWROM**	☐	Avoid lifting **AVLIF**	☐	Local strengthening or stabilizing exercises **STEX**
☐	Local strengthening exercises **LOCEX**	☐	Avoid squatting, kneeling, prolonged standing or walking **AVSQU**	☐	Avoid prolonged standing **AVSTD**	☐	No pushing, pulling, heavy lifting **NOPSH**
		☐	Gradual increase in weight-bearing **INROM**	☐	Avoid prolonged sitting **AVSIT**	☐	Shoulder immobilization **SHOIM**
		☐	Quadriceps strengthening exercises **QUDEX**	☐	Avoid prolonged walking **AVWAL**		
		☐	Gradual increase in aerobic activity **INAER**				

Affix ID label here

Section 6. Work Modification (based on documentation in the first 4 weeks after date of injury)

Complete table for all injury types

Code: 1= documented
9= not documented

☐	Documentation that work modification is not required – if work modification is not required, code '1' and **SKIP TO THE NEXT TABLE** **NOWMD**
☐	Documentation of specific work modification(s) **SPWMD**
☐	Documentation that employer was notified of work modification(s) **EMWMD**
☐	Documentation that provider or medical case manager contacted employer to arrange modified duty to include the work modification(s) **ARWMD**

Section 7. Patient Education (based on documentation in the first 4 weeks after date of injury)

Complete table for all injury types

Code: 1= documented
9= not documented

☐	Natural history of the complaint **PENHX**
☐	Therapeutic options, risks and benefits of options such as opiates, surgery, or inactivity **PEOPT**
☐	Encouragement to maintain aerobic condition **PEAER**
☐	Increase range of motion **PEROM**
☐	Encouragement to progressively strengthen area after acute pain has subsided **PESTR**
☐	Non-specific patient education documented **PENOS**

Affix ID label here

Section 8. Treatments (based on documentation in the first 4 weeks after date of injury)

For questions in this section, use ALL visits and documentation between the 1st visit and the date in Q10.

Complete only one column from the table, corresponding to the worker's type of injury.

Code: 1= ordered
2= completed
9= not documented

FOREARM, WRIST, HAND		KNEE		LOW BACK		SHOULDER	
☐	Non-steroidal anti-inflammatory agent(s) NSAID1	☐	Non-steroidal anti-inflammatory agent(s) NSAID2	☐	Non-steroidal anti-inflammatory agent(s) NSAID3	☐	Non-steroidal anti-inflammatory agent(s) NSAID4
☐	Narcotic(s) NARC1	☐	Narcotic(s) NARC2	☐	Narcotic(s) NARC3	☐	Narcotic(s) NARC4
☐	Aspirin or Tylenol ASA1	☐	Aspirin or Tylenol ASA2	☐	Aspirin or Tylenol ASA3	☐	Aspirin or Tylenol ASA4
☐	Injection, steroid or other INJT1	☐	Injection, steroid or other INJT2	☐	Injection, steroid or other INJT3	☐	Injection, steroid or other INJT4
☐	Physical therapy PHYT1	☐	Physical therapy PHYT2	☐	Physical therapy PHYT3	☐	Physical therapy PHYT4
☐	Occupational therapy OCCT1	☐	Occupational therapy OCCT2	☐	Occupational therapy OCCT3	☐	Occupational therapy OCCT4
☐	X-ray forearm, wrist or hand XRAY1	☐	X-ray of knee XRAY2	☐	X-ray of lumbar or sacral spine XRAY3	☐	X-ray of shoulder XRAY4
☐	Surgical consult SRGCN1	☐	Surgical consult SRGCN2	☐	Surgical consult SRGCN3	☐	Surgical consult SRGCN4
☐	Other consult OTHCN1	☐	Other consult OTHCN2	☐	Other consult OTHCN3	☐	Other consult OTHCN4
	If other consult=1 or 2, Then specify: _____ OTHSP1		If other consult=1 or 2, then specify: _____ OTHSP2		If other consult=1 or 2, then specify: _____ OTHSP3		If other consult=1 or 2, then specify: _____ OTHSP4
☐	Heat or ice HEAT1	☐	Heat or ice HEAT2	☐	Heat or ice HEAT3	☐	Heat or ice HEAT4

Affix ID label here

Section 8. Treatments (continued)

Code: **1= ordered**
2= completed
9= not documented

FOREARM, WRIST, HAND		KNEE		LOW BACK		SHOULDER	
☐	MRI of forearm, wrist or hand **MRI1**	☐	MRI of knee **MRI2**	☐	MRI of lumbar or sacral spine **MRI3**	☐	MRI of shoulder **MRI4**
☐	CT Scan of forearm, wrist or hand **CATS1**			☐	CT Scan of lumbar or sacral spine **CATS3**	☐	CT Scan of shoulder **CATS4**
		☐	Steroid medication **STER2**	☐	Steroid medication **STER3**	☐	Steroid medication **STER4**
☐	Splint, brace or sling **DEVC1**	☐	Splint, brace or sling **DEVC2**			☐	Splint, brace or sling **DEVC4**
☐	Nerve conduction study **NERV1**			☐	Nerve conduction study **NERV3**	☐	Nerve conduction study **NERV4**
☐	TENS or electrical stimulation **TENS1**			☐	TENS or electrical stimulation **TENS3**		
				☐	Muscle relaxant(s) **MRLX3**		
				☐	Anti-depressant(s) **ANTID3**		
				☐	Bed rest **BEDR3**		
				☐	EMG **EMG3**		
				☐	Chiropractor **CHIRO3**		

Affix ID label here

Section 9. Re-Evaluation (Complete for all injury types)

For questions in this section, use ALL visits and documentation between the date in Q10 and the end of the record.

Data Item	Coding Options/Instructions	Data Entry
1. At least one visit 5-8 weeks after the date of injury? **DOI58**	1=yes 2=no – **ENTER 2 and STOP ABSTRACTING**	__
2. Any documentation that the injury remains unimproved 5-8 weeks after the date of injury? **NRSL**	1=yes 2=no – **ENTER 2 and STOP ABSTRACTING**	__
3. Any documentation of a repeat detailed history between 5-8 weeks after the date of injury? **HXREP**	1=yes 9=not documented	__
4. Any documentation of a repeat detailed physical examination between 5-8 weeks after the date of injury? **PEREP**	1=yes 9=not documented	__

Affix ID label here

URAC WORKER'S COMPENSATION PERFORMANCE MEASURES ABSTRACTING INSTRUCTIONS

GENERAL INSTRUCTIONS

Review Sequence: When performing a review, always complete Section 1, Injury and Job Information, first.

Conflicting findings: If the findings documented in the first visit are different from those documented in the second, code the positive finding over the negative one. For example, if the work-relatedness is not documented in the first visit, but the injury is said to be work-related at the second visit, consider that the injury is work-related.

Response Choices: Be careful to read the response choices at the beginning of each section, as there is some variation. Response choices, except for dates and text responses, are numbered. The most common response choices are:

1= documented as present
2= documented as negative
9= not documented

Dates: All date fields should be abstracted as mm/dd/yyyy. Use a leading zero if necessary (e.g., enter February 5, 1999 as 02/05/1999). If a date is clearly within a certain period (e.g., the notes states 10/15 (no year) but appears between 9/1999 and 1/2000), you may assume the entry is in chronological order with the rest of the medical record (enter 10/15/1999).

Symbols: Symbols are often used in medical record documentation. Examples of symbols to consider:

+ =positive	∅ =negative
↑ =elevated or high or increased	↓ =decreased or low
≥ =greater than or equal to	≤ =less than or equal to

Physician Documentation: Use MD, DO, physician assistant, medical student or nurse practitioner documentation only. Do not use other clinician documentation unless the finding is also documented by a physician, physician assistant, medical student or nurse practitioner.

INSTRUCTIONS FOR INDIVIDUAL DATA ITEMS

The abstraction instructions for the next section are displayed in two columns, with a row for each data item:

- The **Data Item** column identifies the question number and name of the data item. This column matches the data item column on the abstraction form itself.

- The **Coding Options/Instructions** column provides terms that might be documented in place of the data item terminology, any special instructions relative to the abstraction for this item, and terms that do not mean the same thing as the data item and should not be abstracted as positive findings.

SECTION 1. INJURY AND JOB INFORMATION

INSTRUCTIONS FOR INDIVIDUAL DATA ITEMS

DATA ITEM	CODING OPTIONS/INSTRUCTIONS
1. Worker's date of birth	Enter the worker's date of birth in mm/dd/yyyy format. If the date of birth is not documented, enter 11/11/1111.
2. Date of injury	Compare the date of injury (DOI) from the review sticker with the DOI documented in the medical record. If the dates are the same, enter the date in mm/dd/yyyy format. If the dates are different, enter the DOI from the record in mm/dd/yyyy.
3. Type of injury	Code '1' if the record documents a low back injury, including lumbar or lumbosacral disc disorders (degenerative or other), sacroiliitis, lumbar spondylosis, lumbago, or strain/sprain of the sacroiliac, lumbar or sacral spine or coccyx. Code '2' if the record documents a shoulder injury, including pain or stiffness of shoulder, capsulitis, rotator cuff problems, disorders of the bursa or tendons, sprain, strain or synovitis. Code '3' if the record documents a knee injury, including pain or stiffness of the joint or lower leg, difficulty walking, tendonitis or bursitis, sprain or strain of a ligament. Code '4' if the record documents a forearm, wrist or hand injury, including pain or stiffness, trigger finger, tendonitis or tenosynovitis, bursitis, sprains or strains. Code '5' if the record does not document a low back, shoulder, knee, forearm, wrist or hand injury **AND STOP ABSTRACTING**
4. Description of injury	Enter the description of the injury as documented by the physician in the record (see representative types of injury in Question 3, above). Do not enter a description or diagnosis made by the worker.
5. Type of job	Code '01' for an Executive, managerial or professional job, including manager, accountant, inspector, engineer, scientist, nurse or teacher. Code '02' for Technical jobs, including health technologist, engineering technologist, computer programmer or legal assistant. Code '03' for Outside sales jobs, including insurance, real estate or other sales representatives. Code '04' for Administrative support jobs, including secretary, clerk, office assistant or postal clerk. Code '05' for Material Handler, Material Mover, Laborer or Helper jobs such as sailor, longshoreman, stocker or laborer. Code '06' for Service and Retail Sales jobs including cook, waiter/waitress, nursing aide, janitor, hairdresser, child care worker or gas station attendant. Code '07' for Craft and Repair jobs including mechanic, construction worker or machinist. Code '08' for Operatives and Fabricators including metal working machine operator, woodworking machine operator, printing machine operator or welder.

5. Type of job (continued)	Code '09' for Farming, Forestry or Fishing jobs Code '10' for Protective Service jobs including police, firefighter, sheriff or correctional officer. Code '11' for Driving jobs, including truck driver, bus driver Code '12' for Other jobs, not specified above Code '99' if the medical record does not document the worker's type of job.
6. Type of job: Other	Enter the type of job if Question 5 was coded 12= Other. If the type of job in Question 5 was <u>not</u> coded 12, enter XXX.
7. Physician determination of the work relatedness of the injury	Code '1' if the physician documents that the worker's injury <u>is</u> work-related. Do <u>not</u> code the worker's assertion of work-relatedness, but only the physician's determination. Code '2' if the physician documents that the worker's injury is <u>not</u> work-related. Code '3' if the physician says that the injury <u>may</u> be work-related or is possibly work-related. Code '9' if the physician does not address whether or not the worker's injury is work-related.
8. Date of first visit after date of injury	Enter the date of the first visit <u>after</u> the date of injury (DOI) in mm/dd/yyyy format. The date of the first visit may be the same as the date of injury.
9. Date of second visit after date of injury	Enter the date of the second visit after the date of injury (DOI) in mm/dd/yyyy format. If no second visit is documented, enter 11/11/1111. Do not enter a date of second visit if the second visit is not for the same injury as the first visit. **Example**, the worker presents on 9/8/99 for a knee sprain occurring the previous day. Enter 09/08/1999 as the date of first visit for question 2. On 10/4/99 (with no intervening visit), the worker presents with a new low back injury. The knee injury is not addressed at the 10/4 visit. Do <u>not</u> enter 10/04/1999 as the date of second visit. Enter 11/11/1111 instead.
10. Date 4 weeks after date of injury	Calculate the date 4 calendar weeks after the date of injury (the date in Q2) and enter it in mm/dd/yyyy format.
11. Is the date of the <u>first</u> visit more than 4 weeks after the date of injury?	Compare the date of the first visit (entered in Q8) with the date 4 weeks after the date of injury (entered in Q10). If the date of the first visit is greater than 4 weeks after the DOI, enter 1 and STOP ABSTRACTING. If the date of first visit is less than or equal to 4 weeks after the DOI, enter 2 and continue abstracting.
12. Is the date of the <u>second</u> visit more than 4 weeks after the date of injury?	Compare the date of the second visit (entered in Q9) with the date 4 weeks after the date of injury (entered in Q10). If the date of the second visit is greater than 4 weeks after the DOI, enter 1. If the date of the second visit is less than or equal to 4 weeks after the DOI, enter 2.

SECTION 2. OCCUPATIONAL REQUIREMENTS

WORKER'S JOB REQUIREMENTS

For each item in this column of the table:

- Code '1' if the medical record documents that the worker's job requires the action
- Code '2' if the medical record specifically says the worker's job does not require the action
- Code '9' if the medical record does not mention whether the worker's job requires the action

Example: The physician's initial assessment states that the worker, a carpet layer, spends up to 60% of his day on his knees, occasionally must pick up and carry rolls of carpet, but rarely has to lift his arms above shoulder level. Code '1' for Kneeling, code '1' for Lifting, code '2' for Repetitive overhead work and code '9' for each of the remaining items in the first column of the table.

If a copy of the worker's job description, including physical requirements, is present in the medical record, it may be used as a source of information for these items.

If Lifting is coded '1' (i.e., the worker's job requires lifting), answer the additional lifting questions

- If the record documents how often lifting is required, code '1'. If it does not, code '9'.
- If the record documents the approximate weight of the lifted load (in pounds, or a statement of heavy/moderate/light), code '1'. If the approximate weight is not documented, code '9'.
- If the lifting position is documented, code '1'. If not, code '9'.

OTHER DOCUMENTATION

Psychosocial job issues

- Code '1' if the medical record documents that the worker had psychosocial job issues (e.g., interpersonal conflict with a co-worker, stress at the pace of work, etc.)
- Code '2' if the medical record specifically denies that the worker has psychosocial job issues (e.g., "enjoys her job and has had excellent performance reviews")
- Code '9' if the medical record does not mention whether the worker had psychosocial job issues

Employment-related issues

- Code '1' if the medical record documents that the worker had employment-related issues (e.g., "recently warned about frequent absences", etc.)
- Code '2' if the medical record specifically denies that the worker has employment-related issues
- Code '9' if the medical record does not mention whether the worker had employment-related issues

SECTION 3. MEDICAL HISTORY AND CURRENT COMPLAINT

Medical History

For each item in this column of the table:

- Code '1' if the record documents that the worker's medical history (current or past) includes the item
- Code '1' if the record specifically denies that the worker's medical history (current or past) includes the item (e.g., "no diabetes")
- Code '9' if the medical record does not address whether or not the worker's medical history includes the item

Current Complaint

For each item in the second column of the table:

- Code '1' if the medical record documents that the worker's current complaint (injury) includes the item
- Code '2' if the medical record specifically denies the item about the worker's current complaint (injury)
- Code '9' if the medical record does not address the item about the worker's current complaint (injury)

Do not code '1' if the record documents a symptom (e.g., numbness or parasthesia) that is not in the location of the worker's current complaint.

SECTION 4. PHYSICAL EXAMINATION

Select the column corresponding to the worker's injury type (e.g., low back). Do not complete the other columns in the table.

For each item in the selected column:

- Code '1' if the physician's examination documents an *assessment* of the item, irrespective of whether the finding is described as positive or negative (or normal/abnormal)
- Code '9' if the physician's examination did not document an assessment of the item

Example: The record under review is for a worker with a shoulder injury. The physician documents "On PE, the right shoulder is held slightly lower than the left. Full ROM with c/o pain on the extremes of adduction. Strength 4/5". Code '1' for General Description, ROM and Motor Strength. Code '9' for Palpation and Sensory Assessment.

SECTION 5. ACTIVITY MODIFICATIONS

Select the column corresponding to the worker's injury type (e.g., low back). Do not complete the other columns in the table.

If the record documents that no activity modifications are necessary (e.g., "resume normal activities", etc.), code '1' in the first row of the column and **SKIP TO THE NEXT PAGE OF THE ABSTRACTION FORM.**

If the record does not specifically document that no activity modifications are necessary, answer each of the remaining items in the column, coding '1 if the record documents a recommendation for the modification, and '9' if it does not.

Do not code '1' for an activity modification undertaken by the worker in the absence of such a recommendation by the physician.

SECTION 6. WORK MODIFICATION

Code this table for worker injuries of all types.

If the record documents that no work modifications are necessary (e.g., "return to work without restrictions"), code '1' in the first row of the table and **SKIP TO THE NEXT TABLE.**

If the record does not specifically document that no work modifications are necessary, answer each of the remaining items in the table.

Specific work modification(s)
Code '1 if the record documents one or more specific work modifications, and '9' if it does not. Do not code '1' for work modifications undertaken by the worker in the absence of such a recommendation by the physician.

Employer notification of work modification(s)

Code '1' if the record documents notification of the employer of the worker's work modification(s), and '9' if it does not. Copies of employer forms completed by the physician and copied to the record may be used as documentation for this item if they include a description of the work modification(s).

Contact to arrange modified duty
Code '1' if the record documents that the physician (or their staff) or a medical case manager contacted employer to arrange modified duty to include the work modification(s). Code '1' if the contact was made, irrespective of whether the employer was able to accommodate the modification(s). Code '9' if no contact was documented.

SECTION 7. PATIENT EDUCATION

Code each item in this table for worker injuries of all types.

Code '1' if the record documents discussing the item with the worker and '9' if it does not.

If the record documents patient education, but does not specify the content, such as "gave patient low back pain handouts", code '1' for non-specific patient education documented.

SECTION 8. TREATMENTS

For items in this section, use ALL visits and documentation between the 1st visit and the date 4 weeks after the date of injury (the date in Q10).

Select the column corresponding to the worker's injury type (e.g., low back). Do not complete the other columns in the table.

For each item in the selected column of the table:
- Code '1' if the medical record documents that the treatment was ordered
- Code '2' if the medical record documents that the treatment was completed
- Code '9' if the medical record does not document an order for or completion of the treatment item

Assume that medications that are ordered are being taken (i.e., code '2' for completed) unless the record specifically documents that the worker is not taking an ordered medication.

Do not consider treatments that are ordered or completed for problems other than the worker's injury or complaint.

Examples:
- The record under review documents that the worker was referred for physical therapy and has attended 2 sessions to date. Code '2' for Physical Therapy.
- The record under review documents an order for an MRI of the shoulder but it was not completed. Code '1'.
- The record under review documents that the worker with a knee injury takes a daily aspirin for cardiovascular prophylaxis. Do not code '1' or '2'.

SECTION 9. RE-EVALUATION

For items in this section, use ALL visits and documentation between the date 4 weeks after the date of injury (the date in Q10) and the end of the record.

Answer these items for worker injuries of all types.

INSTRUCTIONS FOR INDIVIDUAL DATA ITEMS

DATA ITEM	CODING OPTIONS/INSTRUCTIONS
1. At least one visit 5-8 weeks after the date of injury?	Code '1' if the record documents at least one visit 5-8 calendar weeks after the date of injury. Code '2' if the record does not document at least one visit 5-8 calendar weeks after the date of injury and STOP ABSTRACTING.
2. Any documentation that the injury remains unimproved 5-8 weeks after the date of injury?	Code '1' if the record documents that the injury remains unimproved 5-8 calendar weeks after the date of injury, including documentation that the worker is still complaining of the same level of symptoms, the injury has worsened or the injury is no better. Code '2' if the record documents that the injury is resolved, has improved, or is improving and STOP ABSTRACTING.

INSTRUCTIONS FOR INDIVIDUAL DATA ITEMS (CONTINUED)

DATA ITEM	CODING OPTIONS/INSTRUCTIONS
3. Any documentation of a repeat detailed history between 5-8 weeks after the date of injury?	Code '1' if the record documents a repeat detailed history including any new trauma, response (positive or negative) to any treatment, response (positive or negative) to any activity or work modifications. Code '9' if the record does not document a repeat detailed history.
4. Any documentation of a repeat detailed physical examination between 5-8 weeks after the date of injury?	Code '1' if the record documents a repeat detailed physical exam including any changes in range of motion, reflexes, sensation or strength. Code '9' if the record does not document a repeat detailed physical exam.