Design, Development and Evaluation of Driver Wellness Programs

Technical Memorandum Number Two: Survey Analysis and Core Program Design

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Introduction

In May, 1997, the National Private Truck Council's (NPTC) Private Fleet Management Institute (PFMI) began a research program in cooperation with Sue Roberts Health Concepts, Inc., ATA Foundation, Inc., and the Federal Highway Administration's Office of Motor Carriers (OMC) to design, develop, and evaluate a model truck and bus driver wellness program. This wellness program is being developed to provide a resource for addressing truck and bus industry challenges in the areas of driver safety, turnover, performance, job satisfaction, and industry competition. It is intended to provide strategies to give drivers opportunities for improved health. With improved health comes increased happiness, peace, and prosperity, benefiting the individual, the company, and the industry.

As envisioned in the project workplan, this program has five primary research tasks:[1]

- Task One: Wellness literature and programs review
- Task Two: Design core wellness program
- Task Three: Develop and pilot test programs for identified industry segments
- Task Four: Evaluate program effectiveness and make necessary revisions
- Task Five: Develop and implement program marketing and packaging strategy

This document is the product of the Task Two research efforts. Comprised of five sections, the document provides a summary and analysis of the driver and executive surveys and presents the core wellness program.

Driver Survey Description

The following paragraphs provide a brief description of the development of the survey instrument, target population and sample selection, survey distribution and response methods, and response rate.

Survey Development

The survey was designed to address each of the driver wellness issues shown below:

- Health concerns
- Health beliefs
- Health behaviors
- Health knowledge
- Program delivery preferences
- Demographics

For each issue, 5–15 Likert-scale response and open-ended questions were developed. Preliminary and final draft surveys were provided to Steering Committee members for review and approval. The survey was then distributed to 50 truck and bus drivers for pre-testing. Based

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[1]   Task 1A Report: Draft Detailed Workplan. June 8, 1997

on the results of the survey pre-test, necessary revisions were made to minimize misinterpretation of certain questions.

Target Population and Sample Selection
The survey was targeted for the nearly three million licensed commercial bus and truck drivers within the United States. The survey sample comprised 2,750 truck and bus drivers. Twenty-five-hundred (2,500) of the survey recipients were randomly selected from a pool of 6,500 driver names provided by 15 private and for-hire truck fleets and motor coach operators who agreed to participate in the project. Individuals in this pool were comprised of company drivers, owner-operators, and leased driver employees. Candidate companies were selected from the membership databases of National Private Truck Council (NPTC), American Trucking Associations (ATA), and American Bus Association (ABA). Two hundred and fifty (250) of the survey recipients were selected randomly from the membership database of the Owner Operators and Independent Drivers Association (OOIDA).

Generally, companies participating in the project agreed to provide their complete driver roster files which included the name and home address for every currently employed driver. However, three companies wishing to participate in the project could not provide their complete driver roster files because of security reasons. For these companies, a fixed quantity of surveys and instructions on selecting survey recipients were provided. For example, one company was asked to randomly select 50 drivers from their master file of 750 names.

Distribution and Response Methods
As shown in Appendix One, the eight-page survey was printed on 8.5 by 17 inch paper and center-folded to booklet format. The booklets were then folded and inserted into a six by nine inch envelope.

The surveys were mailed via first-class mail on December 9, 1997. Reminder post cards were mailed to each survey recipient on December 16, 1997.

After completing the questionnaire, respondents simply folded and taped the document and returned it via specially bar-coded business reply mail to Sue Roberts Health Concepts, Inc., (SRHC) where a first-class mail permit was established so that there was no postage fee for respondents.

Response Rate
As of January 16, 1998, 448 usable survey responses were received. Since 111 of the 2,750 surveys were undeliverable, the effective response rate was 17.0 percent. The average margin of error for the Likert Scale response questions was ± 3.4 percent (margin of error for proportions), considerably less than the initial margin of error tolerance of ± 5.0 percent.

Method of Analysis
The following sections provide a description of the data coding and entry techniques and analytical methods.

Data Coding and Entry
Completed surveys were forwarded by SRHC to NPTC offices for coding and entry. After being examined for completeness and usability, each survey was numbered and coded into a Lotus Approach database application, which had been developed for this project.

Likert-Scale response questions were assigned a value of one to five, based on the value circled for each question. Responses to the health behaviors (i.e., 29–40), health knowledge (i.e., 41–44), and demographics (i.e., 62–67) questions were entered as numeric values by converting a response value of *"a"* to a data value of one, response value of *"b"* to a data value of two, etc. *"True-false"* and *"yes-no-maybe"* questions were entered similarly. Program delivery preferences (i.e., question 61) were entered as either a value of one or zero, with each circled item assigned a value of one and each non-circled item a value of zero. Open-ended response questions (i.e., 55, 57, 59, 61, 68, and 69) were entered in a word processing document.

Analytical Methods
Once data coding and entry were completed, an in-depth analysis of the survey was conducted using the MINITAB statistical analysis package. First, descriptive statistics were computed for each of the survey questions. Products of the descriptive statistical analysis were:

- Mean response value
- Standard deviation
- Standard error of the mean
- 95 percent confidence interval

Next, an inferential statistical analysis was conducted to examine important relationships between various response sets. Specific statistical tools used included hypothesis tests and mulitvariate techniques. Two sample t-tests were used for assessing whether the observed difference between two mean responses was larger than could have occurred by chance alone. The multivariate technique of Principal Components was used to identify groups of correlated variables that could collected together to create improved measurements. For example, responses for questions 1–14 were combined to develop an overall "level of concern" measure. This combined measure was then used to compare "level of concern" among demographic groups (e.g., long-haul vs. local/short-haul drivers).

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Survey Results and Analysis

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The survey analysis, provided below, includes demographics, descriptive statistics and analysis, and inferential analysis.

Demographics
Survey respondents were asked to indicate age, gender, driving experience, company size and job information. The response for each demographic category follows.

Age
Figure One shows the respondents age distribution among the five age categories provided in the survey. Similar to other industry surveys, the majority (e.g., 35 percent) of our survey

respondents were between 41 and 50 years.[2] This helps to verify that we received a representative sample of the population.

Figure One: Respondents Age
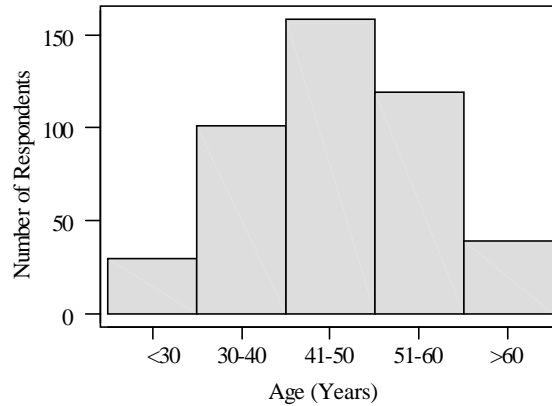
Gender
Respondents were 96 percent male and 4 percent female, which is comparable to the overall gender distribution of the profession.[3]

Experience
Figure Two illustrates the majority (68 percent) of survey respondents had more than ten years commercial vehicle driving experience. This is *typical* of other industry surveys. For example, one survey reported respondents average driving experience as nearly twelve years.[4] This distribution is beneficial to the project, since well-experienced drivers are a target driver wellness program audience, and since their observations would more likely resemble driver realities.

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[2]   In a 1993 job satisfaction survey of 3,910 commercial drivers, the average reported age was 41.2 years. Gene C. Griffin, Julene M. Rodriguez, and Brenda M. Lantz. *Job Satisfaction of U.S. Commercial Drivers.* UPTGI Report No. 90. The Upper Great Plains Transportation Institute, North Dakota State University. 1993. Pp Appendix A-18.

[3]   Ninety one percent of the 3,910 respondents to a 1993 job satisfaction survey were male and 9 percent were female. Ibid. 1, P.13.

[4]   The average driving experience of 3,910 respondents to a 1993 job satisfaction survey was reported as 11.92 years. Ibid. 1, P. A-19.

Figure Two: Driving Experience

Driving Job
Drivers were asked to indicate their primary job. As shown in Table One, the majority of respondents considered themselves long-haul truckload drivers. These individuals are a significant portion of the total driving population. They are primary candidates for wellness programs as they spend a significant portion of their lives on the road, which increases difficulty in maintaining a healthy lifestyle. Again, responses to this question are reflective of the overall industry. For example, a recent Office of Motor Carriers study estimates that local/short haul carriers comprise 20 percent of all registered interstate carriers.

Table One: Primary Driving Job

Job Description	Percent
Local/short haul (within 100 mile radius)	22.8
Long-haul, less-than-truckload	12.8
Long-haul, truckload	57.6
Motorcoach	6.8

Employment
Drivers indicated whether they were company drivers, owner operators, or leased employees. As shown in Table Two, the majority of respondents indicated they were employed as "company drivers."

Table Two: Employment

Employment Method	Percent
Company driver	77.2
Owner-operator	21.5
Leased employee	1.1

Company Size
Most drivers indicated they worked for a large company (50 or more drivers), as shown in Table Three.

Table Three: Company Size

Company Size (Number of Drivers)	Percent
One driver	1.2
2–10 drivers	9.9
11–49 drivers	17.5
50 or more drivers	71.5

Descriptive Statistics and Analysis
Descriptive statistics were computed for each of the previously noted "wellness issue" question sets. Results are provided below.

Health Concerns
Respondents were asked to indicate their level of concern in 14 health areas (questions 1–14). For those items perceived as "almost never a concern," respondents circled a value of one. For those items perceived as "almost always a concern," respondents circled a value of five.   As shown in Figure Three and Table Four, drivers responding to this survey were most concerned about lack of family time, lack of exercise, weight, fatigue, poor diet and stress. They were less concerned about drug, alcohol, and tobacco usage, diabetes, and back/neck injuries.

Figure Three: Health Concerns
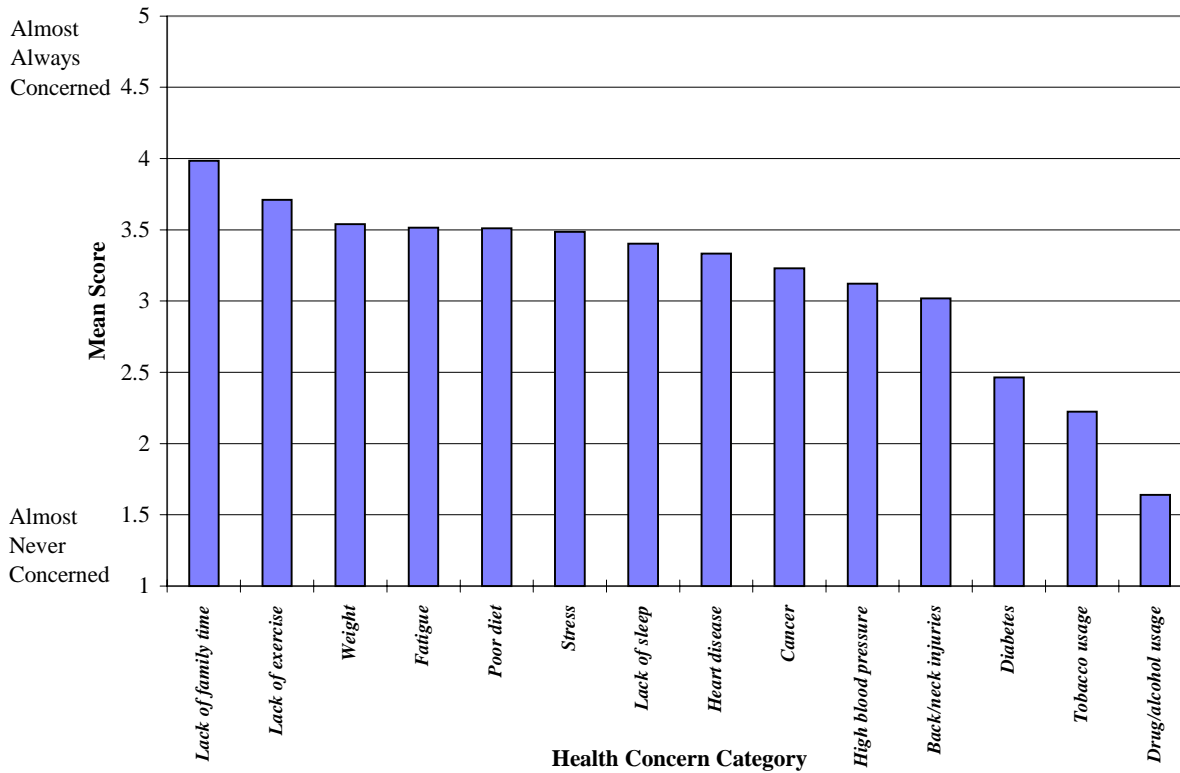
Table Four: Health Concerns

Health Concern	N	Mean	S.E. Mean	Lower C.I.	Upper C.I.
(7) Lack of Family Time	446	3.98	0.05	3.86	4.10
(5) Lack of Exercise	446	3.71	0.05	3.59	3.82
(1) Weight	448	3.54	0.06	3.42	3.65
(14) Fatigue	448	3.51	0.06	3.39	3.63
(4) Poor Diet	447	3.51	0.06	3.39	3.62
(13) Stress	446	3.48	0.06	3.35	3.60
(8) Lack of Sleep	444	3.40	0.06	3.27	3.52
(2) Heart Disease	448	3.33	0.06	3.20	3.46
(3) Cancer	448	3.22	0.06	3.10	3.35
(6) High Blood Pressure	445	3.12	0.07	2.98	3.26
(12) Back and Neck Injuries	447	3.02	0.06	2.88	3.15
(9) Diabetes	447	2.46	0.07	2.32	2.60
(10) Tobacco Usage	447	2.22	0.07	2.07	2.36
(11) Drug and Alcohol Usage	444	1.63	0.06	1.51	1.75
Average Std. Dev. Of Mean Response		1.37			

Health Rating

Drivers were also asked to rate their own health (question 15) and the health of the average driver (question 28) from 1–10, using a value of one for "very poor" and a value of 10 for "excellent." As shown in Figures Four and Five, drivers rated their own health higher than the average driver. In fact, respondents "own-health" rating was more than 2.0 points higher than the average driver. This difference is statistically significant. The p-value for this difference, a measure of the likelihood of a difference like this when there is, in fact, no real difference, is less than 1 in 10,000.

Figure Four: Self Health Rating   Figure Five: Health Rating of "Average Driver" in Profession
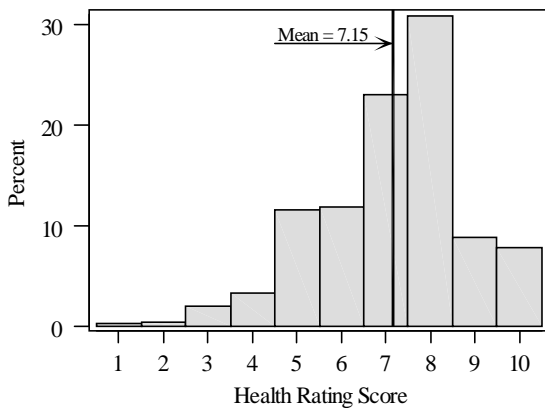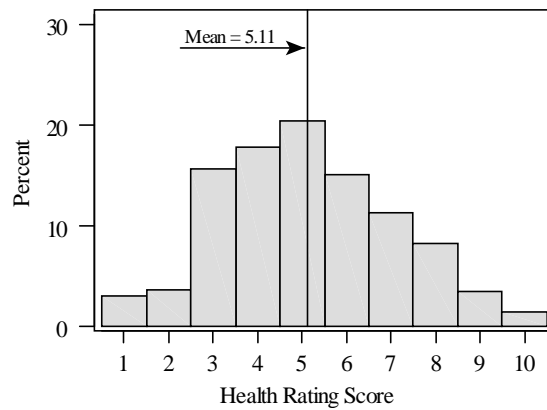
Health Beliefs and Behaviors

Respondents were next asked to indicate their level of agreement regarding 12 health beliefs and health behaviors (questions 16–27). For those items perceived as "strongly disagree," respondents circled a value of one. For those items perceived as "strongly agree," respondents circled a value of five. Respondents most strongly believed retirement, having enough energy, family, and work were important reasons for being healthy. They also exhibited a strong belief in their responsibility for and control of their own health.

This group of questions also addressed several health behaviors questions. As shown by data in Figure Six and Table Five, respondents indicated much lower "action" values (e.g., question 25; I exercise regularly) than "belief" values (e.g., question 20; Health is important for retirement).

Figure Six: Health Beliefs/Behaviors
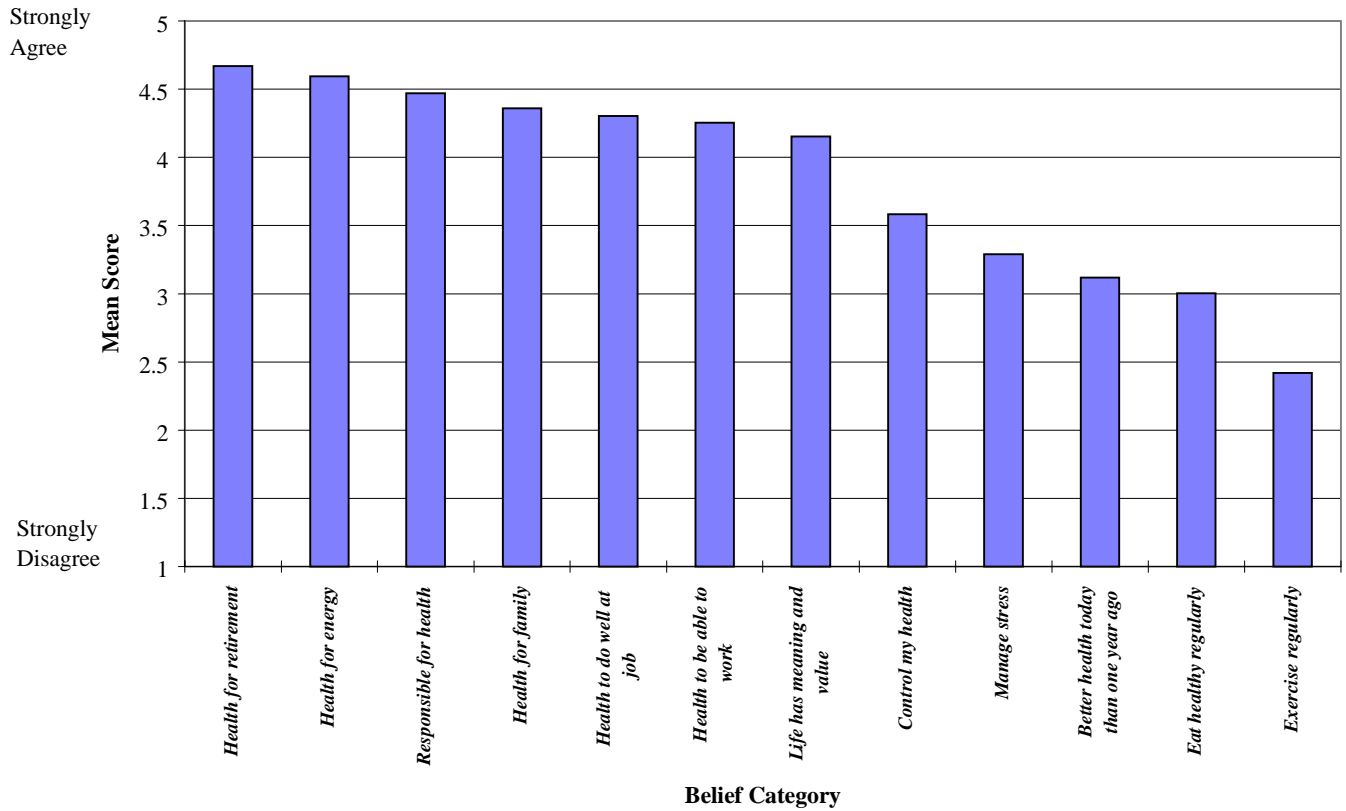
Table Five: Health Beliefs/Behaviors

Health Belief/Behavior	N	Mean	S.E. Mean	Upper C.I.	Lower C.I.
(20) Important for retirement	447	4.66	0.03	4.59	4.73
(27) Important for energy	447	4.59	0.03	4.52	4.65
(26) I am responsible for my health	446	4.47	0.04	4.38	4.55
(19) Important for family	447	4.35	0.04	4.26	4.45
(23) Well at my job	446	4.30	0.04	4.20	4.39
(22) Being able to work	447	4.25	0.04	4.15	4.35
(21) Life has meaning and value*	446	4.15	0.06	4.02	4.27
(18) I control my own health	447	3.58	0.05	3.47	3.68
(17) I manage stress well*	445	3.28	0.06	3.16	3.41
(16) I am in better health today	447	3.11	0.05	3.00	3.22
(24) I eat health regularly	447	3.00	0.06	2.88	3.12
(25) I exercise regularly	443	2.41	0.06	2.29	2.54
Average Std. Dev. Of Mean Response		1.08			

* Responses reverse coded

Health Behavior Stage

For questions 29–40, a variety of behaviors related to health, from eating to relationships, were adapted to the Transtheoretical Stages of Change Model.[5] For example, response choices for question 29 concerning healthy eating correspond to the stages shown below:

Choice	With regard to eating	Stage of Change
a	Eating without regard to health, no intention to change	Pre-contemplation stage
b	Should eat healthier, but not a priority or doesn't know how	Contemplation stage
c	Trying to eat healthier	Preparation and action stages
d	Eating healthier for six months or more	Maintenance stage

The responses for each of these questions are shown in Figures Seven through Eighteen.

Figure Seven: Eating
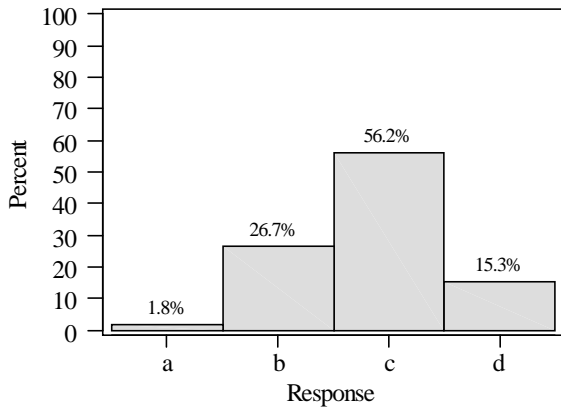
Figure Eight: Activity/Exercise

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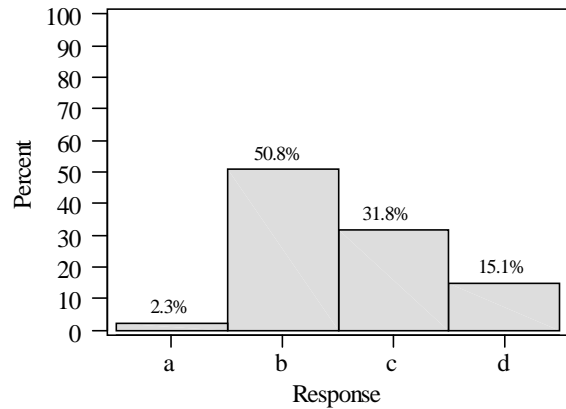
[5]   An in-depth explanation of the Transtheoretical Model by James O. Prochaska is provided in *Draft Technical Memorandum One: Wellness Literature and Programs Review.* September 4, 1997. Pp.18–20.

Figure Nine: Manage Stress

Percent vs Response (a, b, c, d)

a: 1.6%
b: 23.6%
c: 40.0%
d: 36.9%
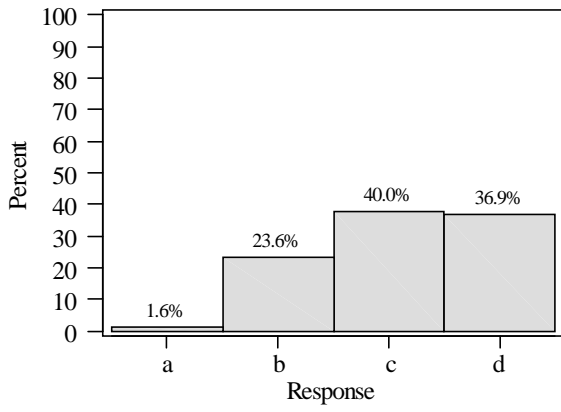
Figure Ten: Personal Finances

Percent vs Response (a, b, c, d)

a: 0.7%
b: 7.4%
c: 36.5%
d: 55.4%

Figure Eleven: Self Care

Percent vs Response (a, b, c, d)

a: 4.1%
b: 19.9%
c: 42.2%
d: 33.9%

Figure Twelve: Sleep

Percent vs Response (a, b, c, d)

a: 4.0%
b: 18.4%
c: 42.2%
d: 35.3%
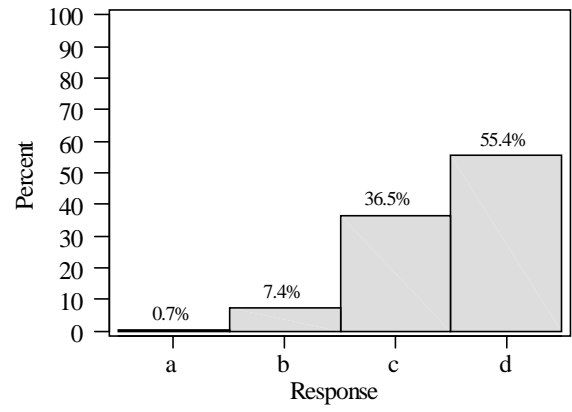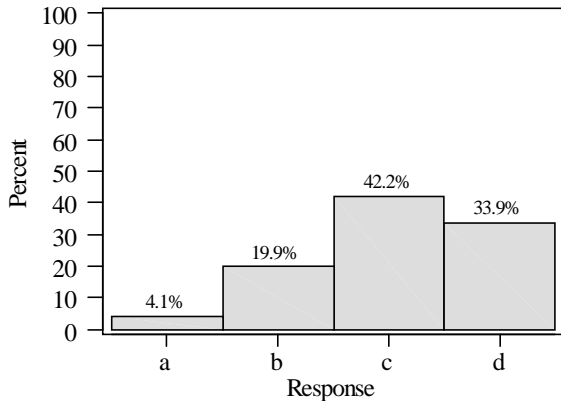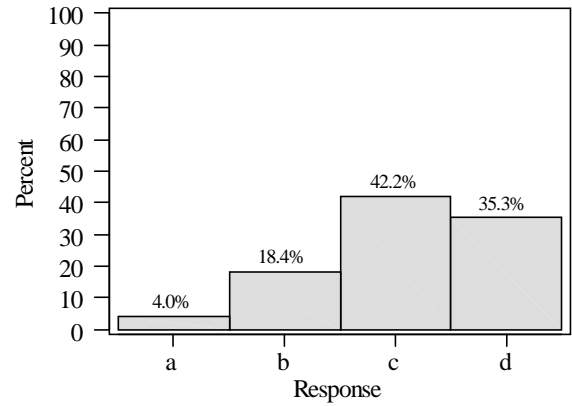
Figure Thirteen: Tobacco Use

Response	Percent
a	8.3%
b	20.6%
c	15.9%
d	55.2%
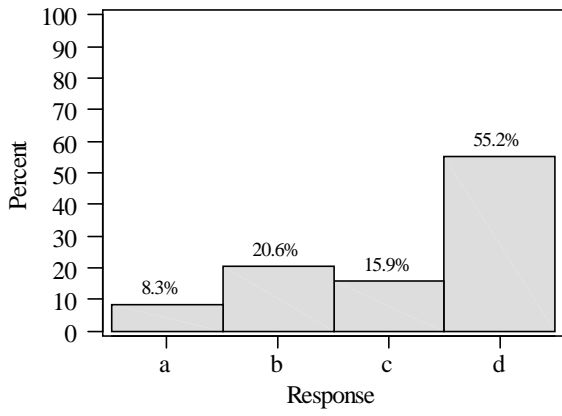
Figure Fourteen: Personal Relationships

Response	Percent
a	2.5%
b	9.1%
c	28.4%
d	60.0%

Figure Fifteen: Work

Response	Percent
a	3.0%
b	18.2%
c	32.5%
d	46.4%
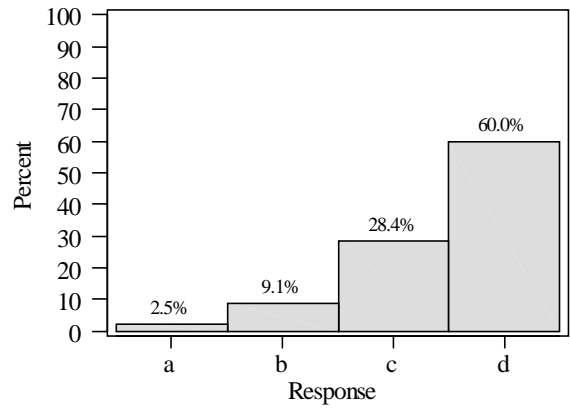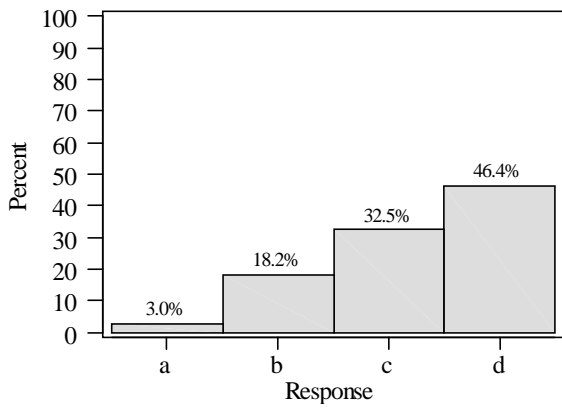
Figure Sixteen: Interests and Hobbies

Response	Percent
a	4.3%
b	16.2%
c	29.5%
d	50.0%
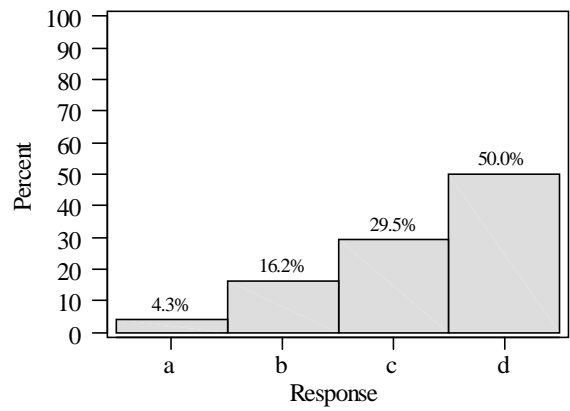
Figure Seventeen: Controlled Substances
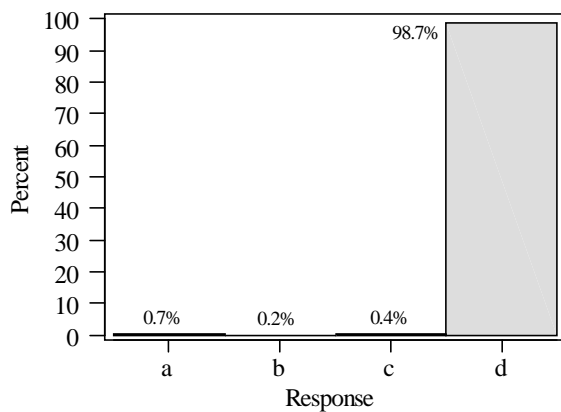
Figure Eighteen: Alcohol
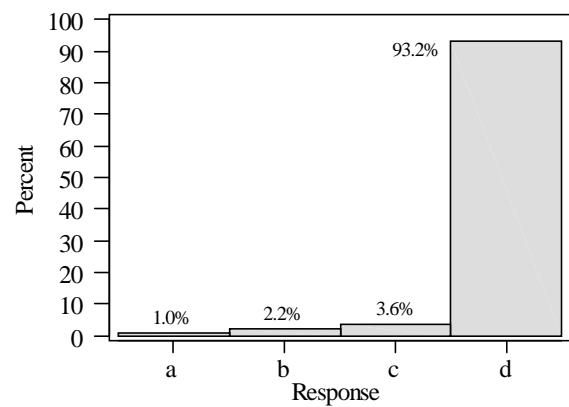
Respondents are most likely to improve a behavior if they selected either "b" or "c." Therefore, these behaviors are more likely targets for programming. Those who respond with "a" are not interested in changing. This number was always small. Those who respond with "d" perceive themselves to be practicing the healthy behavior.

Behavioral areas where respondents are ready or are trying to improve behavior (i.e, those questions where "b" and "c" combined totaled more than 50 percent of responses) were:

- Eating
- Exercise
- Stress management
- Self care
- Sleep
- Work

These areas correspond directly with the areas of greatest concern from questions 1–14 (recall Figure Three and Table Four), which were exercise, weight, fatigue, diet, and stress. The only other area of major concern from questions 1–14 was "lack of family time." Since good relationships exist in this population (60 percent of respondents selected d—I have several very good relationships which I have maintained for six months or more), it follows that lack of time with these relationships would be a concern.

The areas where we believe we do not need to concentrate, because the majority of respondents reported already practicing the healthy behavior, are:

- Personal finances
- Tobacco usage
- Interests and hobbies
- Alcohol usage
- Controlled substance usage

Health Knowledge
Several questions (41–45) were asked regarding health knowledge. These questions examined two perspectives. Did the respondents know their own basic health parameters (e.g., weight, blood pressure, and cholesterol levels)? Could respondents answer basic health knowledge questions?

With regard to weight (question 41), all respondents reported a weight range. However, only 35 percent reported being within ten pounds of a healthy weight. This data confirms the research reported in the literature review, which revealed that over two-thirds of the population was overweight.[6]

With regard to other health parameter questions, 21 percent of respondents reported not knowing their blood pressure, and 50 percent reported not knowing their blood cholesterol level.

Approximately 75 percent of respondents were able to answer the two basic health knowledge questions (44 and 45) correctly.

Eating Behaviors/Beliefs
Specific questions regarding eating behaviors and beliefs were asked in questions 46–54. For each of these questions, respondents were asked how frequently their eating behaviors or beliefs agreed with eating statements. Respondents were instructed to indicate a value of one for *"almost never agree"* and five for *"almost always agree."*

As shown in Figure Nineteen and Table Six, respondents reported knowing how to eat healthy and having partners who cook healthy most of the time (mean response values greater than 3.8). However, the mean response values decrease significantly when respondents were asked about actual eating choices. For example, a two-sample t-test revealed a significant difference between the mean response for "Know how to eat healthy" (question 49) and than the mean response for. "Carry healthy food" (question 51). Stated more simply, nearly 72 percent of respondents selected values of 4 or 5 (almost always) when asked if they knew how to eat healthy while only 33 percent selected values of 4 or 5 (almost always) when asked if they carry healthy food.

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[6]   Research from several studies reported that between 71 and 73 percent of the truck driving population examined was classified as either overweight or obese. *Draft Technical Memorandum One: Wellness Literature and Programs Review.* September 4, 1997. Pp. 2–3.

Figure Nineteen: Eating Behaviors/Beliefs
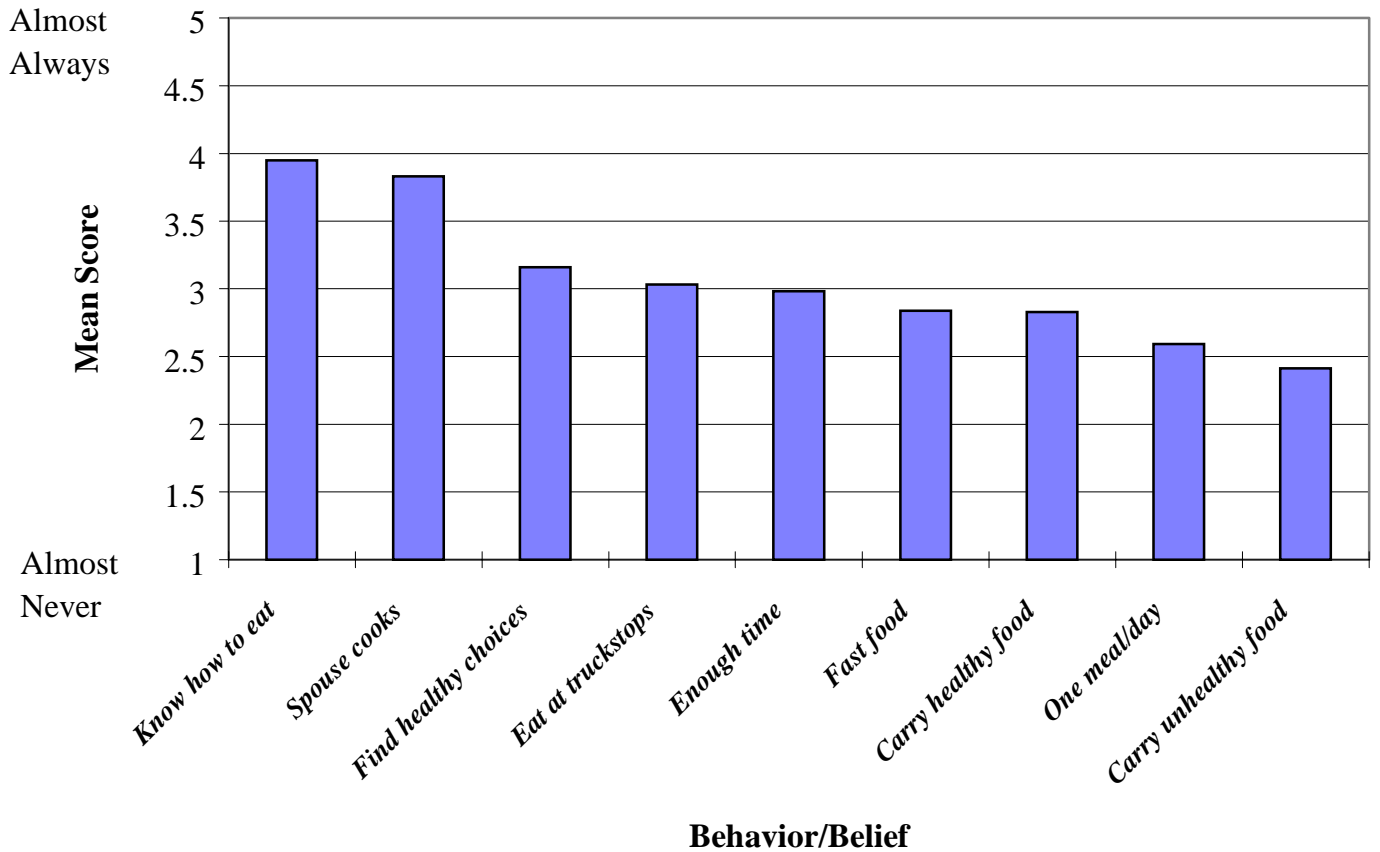
Table Six: Eating Behaviors/Beliefs

Variable	N	Mean	SE Mean	Upper CI	Lower CI
(49) Know how to eat healthy	438	3.94	0.05	3.84	4.04
(48) Spouse/partner cooks healthy	425	3.83	0.05	3.71	3.94
(46) Find healthy choices	441	3.15	0.05	3.04	3.27
(53) Eat at truckstops	442	3.03	0.06	2.90	3.15
(47) Enough time to eat healthy	444	2.98	0.06	2.86	3.10
(50) Eat at fast food restaurants	443	2.83	0.05	2.72	2.94
(51) Carry healthy food	444	2.82	0.06	2.70	2.95
(54) Eat one meal/day	444	2.59	0.06	2.46	2.72
(52) Carry unhealthy food	437	2.41	0.05	2.30	2.52
Average Std. Dev. Of Mean Response		1.25			

Inferential Analysis

The descriptive analysis of the survey results was used as a starting point for drawing inferences about the relationships of demographic factors and various survey responses. The purpose of the inferential analysis was to develop core program design concepts that best-matched the needs of both the various industry segments (e.g., long haul vs. short haul) and the various sub-populations of drivers (e.g., young vs. old) within industry segments.

Multivariate Analysis

Previous results examine one question at a time. It seems natural to examine multiple questions or variables at one time. This is known as multivariate analysis. The following brief definition of multivariate analysis, given by experts in the area, provides a basic understanding of the technique.[7]

> *Multivariate analysis means using many variables to forecast, predict, or understand a situation. For instance, if economists want to predict the likelihood of a recession, they might look at consumer spending. But spending is only one variable of many that affects the economy. To get a more accurate picture, a wide range of factors must be considered from financial variables to human behavior and psychology. Multivariate analysis gathers and puts together all possible information on numerous variables to make predictions and answer questions.*

Dr. Hal Stern, Professor of Statistics, Iowa State University Department of Statistics, guided this phase of the research.

First, using a multivariate statistical analysis technique known as Principal Components, responses from two or more questions were combined to develop and examine overall health measures among respondents, Responses from questions were first combined to develop the composite measures or "super variables" shown in Table Seven. For example, the average response to the first 14 items provides a measure of level of concern.

Table Seven: Wellness "Super Variables"

Survey Questions	Composite Measure
1–14	Level of Concern
16,18,19, 20, 22, 23, 26, and 27	Belief
46–54	Healthy Eating

A statistical method known as Analysis of Variance (ANOVA) was then used to compare and measure the mean responses for the above "super variables" among different sub-populations. ANOVA calculations provide a measure of how different the sub-populations are and identifies the sub-population means. For example, the "level of concern" was compared among the job

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[7]   The Center for Multivariate Analysis, Pennsylvania State University Department of Statistics. *http://www.stat.psu.edu/department/grad_handbook/centers/cma.html.* May 7, 1998.

description (question 64—My type of driving job is) responses. The results of that calculation are shown in Table Eight.

Table Eight: One-Way Analysis of Variance for "Level of Concern"

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-statistic	p-value
Job Description	3	11.097	3.699	5.10	0.002
Error	420	304.347	0.725		
Total	423	315.444			

				Individual 95% "Concern" Confidence Intervals			
Response Level	**N**	**Mean**	**St. Dev.**	+	+	+	+
Local/Short haul	96	2.9195	0.7754			(------*------)	
Long haul LTL	55	3.1355	0.9070			(--------*--------)	
Long haul TL	244	3.2503	0.8361				(---*---)
Motorcoach	30	2.7970	1.0769	(---------------*---------------)			
				+	+	+	+
Pooled St. Dev.		0.8513		2.50	2.75	3.00	3.25

The above analysis provides the following useful information:

1. The mean "Level of Concern" differs across the four categories of Job Description. The difference is statistically significant, since the F-statistic is 5.10 with a p-value of 0.002
2. Long haul TL (truckload) drivers have higher "Level of Concern" scores than other job description types.
3. The mean for respondents in the long-haul TL job is well determined by these data, since the 95 percent confidence interval is narrow (i.e., 3.13–3.3).
4. Although motorcoach drivers have lower "Level of Concern" scores, there is more uncertainty about the mean for this group. (Note: This may be partly attributable to the low number of respondents who classified themselves primarily as motorcoach drivers.)

Summary results of similar ANOVA calculations are reported in Tables Nine–Eleven. Each table provides a summary of the relationship between one of the above super variables (e.g., concern in Table Nine) and certain demographic factors (e.g., age and job type) or health factors (e.g., interest in the program and eating vehavior). The strength (p-value) of the relationship and direction of correlation is also provided for each health issue.

Table Nine: Analysis of Variance—"Level of Concern"

Question	p-value	Relationship	
(64) Job Description			
	p=.0002	Most concern	Long haul TL
		↓	Long haul LTL
		Least concern	Local/short haul
(62) Age			
	p=.0000	Most concern	40-60 years
		↓	<40
		Least concern	>60
(56) Participation			
	p=.0000	Most concern	Would participate
		↓	↓
		Least concern	Would not participate
(25) Exercise regularly			
	p=.03	Most concern	Don't exercise
		↓	↓
		Least concern	Do exercise
(24) Eat healthy			
	p=.03	Most concern	Don't eat well
		↓	↓
		Least concern	Eat well

Table Nine shows those willing to participate in wellness programs are more concerned than those who would not participate. Long haul truckload and those individuals between 40 and sixty years old are most concerned. Those with the most concern were also those who reported not exercising or poor diet.

Table Ten: Analysis of Variance—"Belief"

Question p-value	Relationship	Question p-value	Relationship

(41) Weight

p=.000
Low belief	Highest weight
↓	↓
High belief	Lowest weight

(35) Tobacco Usage

p=.000
Low belief	Tobacco use
↓	↓
High belief	No tobacco use

(62) Age

p=.015
Low belief	Younger
↓	↓
High belief	Older

(36) Relationships

p=.000
Low belief	Poor relationships
↓	↓
High belief	Good relationships

(24) Eat healthy regularly

p=.000
Low belief	Poor eater
↓	↓
High belief	Healthy eater

(37) Work

p=.000
Low belief	Unfulfilled by work
↓	↓
High belief	Fulfilled by work

(25) Exercise regularly

p=.000
Low belief	Poor exerciser
↓	↓
High belief	Good exerciser

(38) Interests and hobbies

p=.000
Low belief	Low interest/hobbies
↓	↓
High belief	Most int./hobbies

(32) Personal finance

p=.000
Low belief	Poor finance
↓	↓
High belief	Good finance

(39) Controlled substance usage

p=.000
Low belief	Controlled sub.
↓	↓
High belief	No Control sub.

(33) Health/self care

p=.000
Low belief	Poor health/self care
↓	↓
High belief	Good health/self care

(40) Alcohol usage

p=.000
Low belief	More alcohol use
↓	↓
High belief	Least alcohol use

The data in Table Ten shows that as respondents increase their beliefs (i.e., "I am in control of my health," or "I am responsible…") their lifestyle behaviors become those associated with improved health. This supports theories of self efficacy and self control.

Table Eleven: Analysis of Variance—"Healthy Eating"

Question	p-value	Relationship		Question	p-value	Relationship

(41) Weight is
p=.000	Poor eating score	Higher weight
	↓	↓
	Good eating score	Lower weight

(1) Weight concern
p=.008	Poor eating score	More weight concern
	↓	↓
	Good eating score	Less weight concern

(15) Health rating score
p=.000	Poor eating score	Low health self rating
	↓	↓
	Good eating score	High health self rating

(65) Driving experience
p=.000	Poor eating score	Less experience
	↓	↓
	Good eating score	More experience

(28) Average profession health rating
p=.000	Poor eating score	Poor prof health rate
	↓	↓
	Good eating score	Good prof health rate

(64) Job description
p=.01	Poor eating score	Long haul TL
	↓	↓
	Good eating score	Local & LTL

(43) Blood cholesterol
p=.001	Poor eating score	Poorest cholesterol
	↓	↓
	Good eating score	Best cholesterol

(62) Age
p=.000	Poor eating score	Younger
	↓	↓
	Good eating score	Older

(25) Exercise regularly
p=.000	Poor eating score	Exercise least
	↓	↓
	Good eating score	Exercise most

(31) Manage stress
p=.000	Poor eating score	Most stress
	↓	↓
	Good eating score	Less stress

(32) Personal finance
p=.000	Poor eating score	Poor finance
	↓	↓
	Good eating score	Good finance

(33) Health/self care
p=.000	Poor eating score	Poor healthcare
	↓	↓
	Good eating score	Good healthcare

(34) Sleep
p=.000	Poor eating score	Lack of sleep
	↓	↓
	Good eating score	Enough sleep

(36) Personal relationships
p=.000	Poor eating score	Poor relationships
	↓	↓
	Good eating score	Good relationships

(37) Work
p=.008	Poor eating score	Unfulfilled by work
	↓	↓
	Good eating score	Fulfilled by work

(38) Interests and hobbies
p=.01	Poor eating score	No/few hobbies
	↓	↓
	Good eating score	Many int./hobbies

(42) Blood pressure
p=.001	Poor eating score	Poor blood pressure
	↓	↓
	Good eating score	Good blood pressure

Responses to the "healthy eating" super variable, shown in Table Eleven, correlated with more questions than the other two composite measures. This indicates that better eating habits are a good indicator of other healthy lifestyle habits. It also implies eating habits should be a major building block for the core program.

Segment Analysis
Next, a subset of "healthy drivers" was extracted and compared to the pool of all respondents. The purpose of this step was to determine what traits this group exhibited that set them apart from other drivers. The criteria for the healthy driver group was:

- Self-health ratings (question 15) greater than seven
- Within 10 pounds of "healthy weight level" (question 41: response "b")
- Strong agreement with the statement: "I am in better health than I was one year ago." (question 16: response of four or five)
- Strong agreement with the statement: "I feel I have control over my own health." (question 18: response of four or five)
- Strong agreement with the statement: "I am responsible for my own health." (question 26: response of four or five)

This yielded a pool of 42 respondents. Summaries of the survey responses for this group is shown in Appendix Two. The mean responses for this subset of the pool were compared to the remainder. Two sample t-tests were then conducted to determine whether the responses from the "healthy drivers" pool were significantly different from the pool of all driver respondents. Table Twelve provides the results of the two-sample t-test calculations for questions with statistically significant differences in the mean responses (at the 0.05 level, p-value less than 0.05). Table Twelve also provides the question number, mean response values (total population and "healthy driver" subsets), absolute value of the mean response difference, confidence interval and p-value. The table is sorted by the absolute value of mean response differences and ranked in descending order.

The table illustrates regular exercise and eating healthy are the health issues with the most significant differences between the "healthy driver" population subset and the pool of all other respondents. This confirms the findings of the multivariate analysis. Interestingly, the following other observations can be made regarding "healthy drivers:"

- Perceive themselves to better manage stress
- Less concerned over fatigue
- More strongly perceive that life has meaning and value
- More driving experience
- Eat at fast food restaurants less frequently
- More strongly believe in the need of good health for energy, work, and job
- Carry unhealthy food less frequently

This data supports theories that suggest self efficacy and feelings of self control lead to healthier behavior.

Table Twelve: Mean Response Comparisons—Total Population vs. "Healthy Drivers"

Ques. Num.	Health Issue	Mean: All	Mean: Healthy	Abs. Diff.	Upper C. I.	Lower C. I.	P-value	Direction
25	Exercise regularly	2.42	3.74	1.32	-1.70	-0.93	0.0000	Higher
24	Eat healthy regularly	3.00	3.90	0.90	-1.25	-0.54	0.0000	Higher
30	Activity and exercise behavior	2.59	3.33	0.73	-0.97	-0.50	0.0000	Higher
48	Spouse/partner cooks healthy	3.83	4.561	0.73	-1.03	-0.43	0.0000	Higher
17	Manage stress*	2.29	3.00	0.71	0.30	1.12	0.0100	Higher
47	Enough time to eat healthy	2.98	3.67	0.69	-1.10	-0.26	0.0020	Higher
52	Carry unhealthy food	2.41	1.76	0.65	0.27	1.03	0.0011	Lower
50	Fast food restaurants	2.84	2.19	0.65	0.26	1.03	0.0015	Lower
49	Know how to eat healthy	3.95	4.561	0.61	-0.88	-0.34	0.0000	Higher
14	Fatigue	3.52	2.93	0.59	0.10	1.07	0.0170	Lower
29	Eating behavior	2.849	3.42	0.58	-0.81	-0.34	0.0000	Higher
21	Life has meaning and value*	3.15	3.71	0.56	0.24	0.87	0.0007	Higher
33	Health care behavior	3.05	3.61	0.56	-0.75	-0.36	0.0000	Higher
65	Driving experience	3.93	4.38	0.45	-0.77	-0.13	0.0076	Higher
31	Manage stress behavior	3.101	3.54	0.44	-0.69	-0.2	0.0008	Higher
62	Age	3.08	3.52	0.44	-0.80	-0.08	0.0160	Higher
27	Health for energy	4.49	4.92	0.43	-0.43	-0.23	0.0000	Higher
34	Sleep behavior	3.08	3.5	0.41	-0.60	-0.22	0.0000	Higher
46	Find healthy choices	3.16	3.57	0.41	-0.79	-0.03	0.0350	Higher
32	Personal finance behavior	3.46	3.857	0.39	-0.51	-0.26	0.0000	Higher
37	Work behavior	3.22	3.595	0.37	-0.59	-0.15	0.0014	Higher
23	Health to do well at job	4.30	4.643	0.34	-0.65	-0.03	0.0330	Higher
22	Health for work	4.26	4.595	0.33	-0.64	-0.03	0.0300	Higher
36	Personal relationships behavior	3.45	3.707	0.24	-0.40	-0.08	0.0031	Higher
20	Health for retirement	4.66	4.902	0.23	-0.37	-0.09	0.0100	Higher
40	Alcohol behavior	3.89	3.976	0.08	-0.15	-0.02	0.0110	Higher

* Note: Responses for questions 17 and 21 were "reverse coded." Since these questions were stated in the negative (e.g., I don't manage stress well) the responses were reversed. Therefore, a response of one was entered in the data set as a response of five.

Differences in responses to the open-ended question "last meal on the road" (i.e., question 55) were also examined. First, the meals listed were classified as either healthy choices or unhealthy choices. Next the responses were tabulated for both the total population and the "healthy driver" subset. Not suprisingly, 59 percent of "healthy driver" group ate healthy for their last meal on the road, while only 35 percent of the total group ate healthy.

Executive Survey Summary

In-depth one-on-one interviews were conducted with key executives and managers of ten private and for-hire truck fleets to examine issues effecting wellness program success. The interviews included such topics as:

- Implementation concerns
- Tracking program performance
- Measuring program cost
- Program support requirements
- Expected outcomes on fleet safety performance

The questionnaire and tabulation of responses is provided in Appendix Three and a summary of responses is shown below.

Greatest Challenges Facing the Industry

Finding and retaining qualified, safe drivers. Many of the executives noted that this problem is exacerbated by driver treatment from shippers and receivers. Several executives were concerned about complying with ever-increasing fleet and employee safety and health regulations.

Importance of Health Care

Employee health is important since it has a direct impact on health care costs (cited by one executive as 2 percent of gross revenue, or, approximately $5,000 per year per employee), absenteeism, and workers compensation claims.

Current Wellness Programs

Four companies offered no programs, with concerns such as "too expensive," "too hard to implement," or "difficult to maintain," cited most frequently as implementation barriers. Four companies offer limited programs, such as smoking cessation plans. Two companies have more comprehensive programs, which are primarily designed to boost employee morale and promote a positive company image.

Current Program Effectiveness

Three rated their programs as "not effective," and two said their programs were too new to rate.

Employees Health Ownership and Responsibility

Although managers would like their employees to take more responsibility for their own health, most interviewees did cite "adequate employee health ownership."

- **Why isn't employee health ownership greater?** It's part of the image, time, and culture of the blue collar worker. Availability of healthy food on the road are also issues drivers must contend with.
- **How could this be improved?** Programs need to be convenient, simple and fun— perhaps with creative incentives. Long-term quality of life needs to be emphasized.

Rewarding Healthy People
While only one company rewarded employees for low absenteeism or safe health practices, most would consider such a program. Interviewees weren't sure how to implement a healthy reward program, but most agreed that effective rewards need to be more than just money.

Existing Employee Benefits Packages
Most executives offer health insurance, life insurance, disability, 401K, and retirement plans. Some also had holiday and vacation pay plans, sick leave, safety incentives, and vision and dental programs.

Current Health Care Costs
While some executives could not quote their costs, others ranged from $1,500 (pays 50 percent of cost) to $9,600 per year per employee.

- **Workers compensation**: Some did not know and others ranged from $310 per year to $7.00 per hour.
- **Examination of costs**: While one company did report using risk managers to examine and manage costs, most interviewees did not generally conduct detailed studies of health care costs and their cost drivers.
- **Percentage of health care costs on wellness**: Three managers felt wellness should comprise 25–50 percent of total health care costs. One agreed philosophically in spending health care budgets on wellness, but could not justify the expense since their is no way to measure return on investment.

Driver Turnover
Turnover ranges from 2–105 percent per year were cited. Lower turnover rates were reported by those companies with drivers working close to home. Average turnover was about 50 percent.

- **Methods to decrease turnover**: Better training, better interaction with and appreciation from management and enhanced benefits package. One executive noted that a decrease in turnover will require more family involvement (e.g., calling card program) and better pay.

Wellness Program Implementation Concerns

- **Concerns cited**: driver scheduling and time constraints (e.g. hard to provide program, given that drivers are not frequently available at terminal), employee participation, program administration, and cost
- **Possible resolutions**: Work around driver schedules, involve families, and educate drivers to understand importance of healthy lifestyle
- **Willingness to implement**: Most would consider paying to implement a program if it met their criteria
- **Economic justification**: Executives would need proof of return on investment, such as improved safety,

Wellness Program Performance Measures

- Improved health and safety, and reduced fatigue
- Increased participation and family involvement
- Success stories
- Better eating habits
- Decrease in risk factors (i.e., weight, smoking)
- Decrease in employee absenteeism and turnover
- Reduced insurance claim frequency and lost work day cases

Executive Commitment to Optimal Health
Interviewees were asked what they did to maintain optimal health. Responses included:

- Does not smoke, watches diet, not enough exercise, "I haven't had a heart attack yet."
- Walks every day- 2 miles
- Takes Herbs- licorice
- Watches food intake
- Manages stress- practices relaxation techniques
- I don't exercise as much as I could
- Takes vitamins, interested in losing weight
- I'm very healthy and don't worry very much about it and know what to do
- Exercise, non-smoker, executive physical, eat very well
- Walks every night, I watch what I eat, I don't smoke, I don't drink very much

Core Wellness Program

Reaching a definitely unique, yet diverse, audience such as truck and bus drivers requires an equally unique approach in the design of a core program for health and safety.

> *"Drivers build a thick wall around them to survive. They believe they need this wall to be strong. They feel there is an unwritten rule not to be vulnerable. Other drivers and families are the people who can lower this wall."*[8]

It was through much brainstorming, ideation, and concepting that the core program was developed. Assumptions were taken apart and examined, drivers were given a voice through the comprehensive truck and bus driver survey, and the driver environment, from medical access to dining opportunities, was reviewed. Many questions were addressed:

- How do we provide a program which has a holistic perspective?
- How much should we break from the current medical model which is and will continue to be undergoing change and is not holistically oriented?
- What major themes should the program include to be of most value to the driver population?
- What is the best way to use the transtheoretical (stages of change) model of Prochaska in the program?[9]
- How do we deal with the very unique subculture of the driver population?
- How do we individualize the program to reach different needs of different drivers?
- How can the program be designed for the easiest implementation yet give options to companies (along with individual drivers)?

These questions were the driving force behind the thought processes that went into the design of the core program.

A Holistic Approach To Truck And Bus Driver Health

We believe the best way to improve the health of the driver population is to develop a program based on the concepts of holism and self-responsibility. This is especially appropriate in the driver population where personal control is a common characteristic.

The concept of holistic health (although not always called this) has been believed and practiced with peaks and valleys at various times over the centuries. The emergence of the wellness movement in the 1970's started bringing bits and pieces of holism back into our thinking. John Travis, M.D. a leader of the wellness movement, suggested wellness was not a neutral state of no

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[8] William Nestor, President, Fleet Solutions, personal communication, February, 1998
[9] James O. Prochaska, Carlo C. DiClemente, and John C. Norcross. *In search of How People Change: Applications to Addictive Behaviors*. American Psychologist. Vol 47, No. 9 (September, 1992). American Psychological Association. Pp 1102-1114

disease, but a positive state of well-being accompanied by feelings of vitality, joyfulness, and energy.[10]

Elliott Dacher, M.D., has more recently defined an integrated healing model which has been incorporated into the core program.[11] It is based on the belief that we are moving toward a new world view, a paradigm shift that can be characterize by the emergence of a set of assumptions that are better matched to the needs of our time. These assumptions are dynamism, holism, and purposefulness.

Dynamism is characterized by the view that human life is a vital process of growth and development, resulting from the ongoing interaction and adaptation of man to his changing environment. This perspective asserts that the human condition can not be exclusively understood through the accumulation of static data that ignores the influence and validity of psychological, social, spiritual, and environmental influences.

- **Essence**: Driver health issues and problems are not one dimensional, but part of a larger dynamic system.

Holism is the term used to designate the viewpoint that life is a natural, organized, and unfolding process that consists of constituent elements bound together in a unitary whole.

- **Essence**: Acknowledging the "big picture" is important for driver health.

Purposefulness expresses the view that human life has direction and meaning.

- **Essence**: Driver's need to find and have meaning in their life.

This new model of health—integrated healing—as created by Dr. Dacher, is *person-centered*. It begins with a focus on our innate healing capacities with four interactive healing systems. These four systems are:

- *Homeostasis*: the bodies natural, inborn self-healing system which maintains a constant internal environment.
- *Treatment:* the use of external agents, treatments, and practices for the purpose of repairing abnormalities and restoring function.
- *Mind-Body*: the full development of the mind, which is activated through personal choice and initiative leading to a progressive capacity for self-regulation.
- *Spiritual:* the way of 'being' that provides meaning to our day-to-day experiences and the larger issues of living and dying. It is balance and connectedness.

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[10]   John W. Travis, M.D. *Wellness, Small Changes You can Use to Make a Big Difference*. Berkeley, California: Ten Speed Press1991.

[11]   E.S. Dacher. *Whole Healing: A Step by Step Program to Reclaim Your Power to Heal*. New York, NY: Penguin Books USA Inc. 1996.

The implications of this new, expanded health model are shown below. This further explains how it relates to the driver wellness program.

Program Element	Biomedical Model	Expanded Model
Database	Physical findings Medical history Laboratory testing	Environmental Psychosocial Spiritual
Objective	Repair Restoration of function	Personal autonomy Enhanced capacity/resources Wholeness/coherence
Approach	Standardized	Individualized
Responsibility	Health professional	Shared responsibility Individual responsibility
Expenditures	Physician visits Procedures Rehabilitation	Education Information Cognitive time
Action	Reactive	Proactive

Source: Elliot Dacher, M.D.[12]

This expanded model matches the driver population:

1. It addresses their whole life (i.e., the environment in which they live) and not just their physical findings (such as blood pressure).
2. The 'driver' culture recognizes individual responsibility (survey results) and personal autonomy (conversation with William Nestor) as very important. These are key elements in this model.
3. The lifestyle of the driver is such that physician-centered care is difficult and less applicable.
4. The education, information, and cognitive time of the expanded model puts the driver in more control of their own care.

Major Topics
The core program was built around the major areas of concern as reported in the survey. These areas were:

- Family
- Exercise

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[12] E.S. Dacher. (Speaker). *Holistic Primary Care: Current Knowledge and New Approaches.* (Cassette Recording No. 1MS98-029). Berkeley, CA: Conference Recording Service. 1998.

- Weight
- Diet
- Fatigue
- Stress

These topics were addressed in several areas of the survey by the drivers.

1. The major health concerns Likert scale had the above topics with the highest means indicating the most concern in these areas.
2. On the behavioral questions using the Likert scale, respondents scored the lowest on managing stress, eating healthy, and exercising regularly.
3. Behavioral areas where respondents appear to be the most willing to improve behaviors from the Transtheoretical Stages of Change Model by Prochaska section of the survey were: eating, exercise, stress management, self-care, and sleep as explained above.

These topics are also consistent with typical topics addressed in wellness programs designed to improve health.

To address these topics we developed the **4 R Road Challenge** with:

- **Refueling**: diet and weight
- **Relating**: family and social
- **Relaxing**: fatigue and stress
- **Rejuvenating**: exercise/moving

Stages of Change Model
The Transtheoretical Stages of Change Model by Prochaska, as described in detail in the work plan and Technical Memorandum One, was used in several ways in the development of the core program. [13] First, it was used in the analysis of the survey to determine which topics to focus on in the core program. The areas where the majority of drivers were in preparation or action (as defined by answering either of the questions related to the stages—" I believe I should eat healthier, but I don't know how or have not made a priority" or " I am trying to eat healthier") were the areas we chose as topic areas for the core program. These areas were eating, exercise, stress management, self care and sleep. In addition, we did not choose to develop the program around topics where the majority of respondents appeared to be in maintenance (i.e., drug and alcohol use).

We also are using the Transtheoretical Stages of Change Model in the main information booklet which will be provided to drivers in the Action Phase. Each topic area—Refueling, Relating, Relaxing, and Rejuvenating—will have a four step process (correlating to a four month Action Phase) where participants will follow an adapted version of the stages process as they progress through each topic.

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[13]   Prochaska, et. Al. Pp.1111-1113.

- **Month One**: Building awareness (Stage 1) .... "Tell Me About It"
- **Month Two**: Determining pros and cons (Stage 2) .... "Maybe. I Should. I Could."
- **Month Three**: Acting on intentions (Stages 3&4) .... "What Do I Need to Do?"
- **Month Four**: Maintaining successes (Stages 5&6) .... "What's Next?"

Grass Roots Approach

Drivers trust and listen to other drivers. This theme has been repeated throughout the research phase of the project from interviews, the survey, and readings. The two models being used in the core program shift the responsibility to the driver and create an environment where drivers will share with drivers. As an example, we would like to use drivers from the America's Road Team as one of the pilot groups. Not only would they be great role models, but also great marketers of the program in general. They could be very important in getting other driver involvement. The program materials will also be loosely designed so they can take shape from within the industry. Experienced industry writers will prepare the written material so it talks specifically to the driver and their needs. Other industry spokespersons will be used whenever possible.

For long-term success, many facets of the driver culture—the family, truck stops, the driving public, and the employer—must embrace the concept that a healthy driver is a safer driver and participate as well. Drivers will heed the call to action, but they can need a supportive and changed environment for it to occur.

Individualization And Implementation

The more a health program can be personalized for the individual driver, the greater the potential for improved lifestyle behaviors. We are, however, dealing with an extremely large number of potential users which makes individualization difficult. In addition, different companies may choose to do more or less for their work force.

With this in mind, we envision a program which gives both the company, and each individual driver within a company, options. It is developed so even drivers within the same company can choose a different track to follow through the program. However, as the program options are tested during the pilot program testing phase, each pilot group will track through the program differently, but individual drivers within each pilot group will not track differently (even though this is possible).

The core program is designed to fit into the pilot timetable of six months.

- **Month One**: Recruitment Phase
- **Month Two**: Introductory Phase
- **Months Three–Six**: Action Phase

Figure Twenty and Table Thirteen illustrate how an individual driver would move through the program. Depending on options the company chooses to offer its employees, there are potentially forty-eight different pathways a driver could follow. Details on each aspect of the program follow.

Figure Twenty: Core Wellness Program

**Phase I:
Recruitment**

**Phase II:
Introduction**

**Phase III:
Action**

**Phase IV:
Evaluation**

Project Committee

| Industry magazines | Radio | Audio Magazine |

Pilot Company

| Newsletter article for company publications | Postcard | Poster | Audio Magazine | CEO Letter | Brochure |

Join

Introduction and Health Assessment

| **Individual**
Brochure +
Audio + Video | **Group**
Brochure + Audio +
Seminar (speaker or video) |

| Health Assessment
(Lifestyle/Physical/Goal setting)
Truck Stop | Health Assessment
(Lifestyle only) | Health Assessment
(Lifestyle/Physical/Goal setting)
On Site |

Information Package
Booklet + Audio + Video + Internet

Coaching

| Yes
Weekly Telephone | Yes
Monthly Onsite | No |

Snack Pack

| Yes
Terminal | Yes
Mail | Yes
Truck Stop | No |

Exercise membership

| Yes
On-site | Yes
Truck Stop | Yes
Community | No |

Reassessment

| Health Assessment
(Lifestyle only) | Health Assessment
(Lifestyle/Physical)
Truck Stop | Health Assessment
(Lifestyle/Physical)
On-Site |

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Table Thirteen: Core Program Overview

Program Phase	Phase Description
I. Recruitment Phase	• Industry wide information • Individual driver recruitment within chosen pilot groups
II. Introductory Phase	• Drivers participate in 1 of 4 introduction pathways: » Individual information with lifestyle/physical/goal setting assessment at truck stop » Individual information with lifestyle only assessment » Group information session with lifestyle only assessment » Group information session with lifestyle/physical/goal setting assessment on site • Company will have input into which options are made available, but even within a company, different drivers could choose potentially different tracks depending on their schedule and needs and what company will provide
III. Action Phase	• All participants receive base information package. This is the minimum the program will offer • Options (12 pathways) in action phase include: » Coaching on site, telephonic, or none » Snack pack, yes or no » Exercise membership, yes or no • Company will have input into which options are made available, but even within a company, different drivers could choose potentially different tracks depending on their schedule and needs
IV. Evaluation Phase	• Testing as done in Introductory phase will be repeated

Pilot Groups

Six different pilot groups are suggested for the testing phase. They are:

Pilot One: The America's Road Team members .... 10 participants
Pilot Two: Long haul drivers from a small company................. 20 participants
Pilot Three: Long haul drivers from a large company............... 30 participants
Pilot Four: Short haul drivers.. 20 participants
Pilot Five: Bus drivers.. 25 participants
Pilot Six: Truck stop employees.. 15 participants

Table Fourteen and Figures Twenty-one to Twenty-seven show how we suggest each pilot group track through the core program. As illustrated, a different set of variables is being tested in each of the different pilot groups.

Table Fourteen: Pilot Groups

	One **Road Team**	Two Long Haul Small Company	Three Long Haul Large Company	Four Short Haul Company	Five Bus Company	Six **Truck Stop**
Recruitment	Project	Company	Company	Company	Company	Company
Introductory Session	Group	Individual	Group	Group	Group	Individual
Health Assessment	All On-site	All Truck stop	All On-site	All On-site	All On-site	All On-site
Information Package	Yes	Yes	Yes	Yes	Yes	Yes
Coaching	Yes Telephone	No	Yes Telephone	Yes Onsite	Yes Onsite	No
Snack Pack	Yes Mail	No	Yes Terminal	No	Yes Terminal	Yes Truck stop
Exercise Membership	Yes Rolling Strong	No	Yes Company Facility	Yes Communit y	No	Yes Rolling Strong
Reassessment	?	All Truck Stop	All On-site	All On-site	All Onsite	All On-site

Each of the pilot groups was selected for reasons as stated.

Pilot One: The America's Road Team
This pilot group is suggested because it is hoped they can build grass roots support within the industry and act as catalysts and role models across the industry after they have gone through the program and see the positive results for themselves. They will receive the introductory session and health assessment as a group at their road team training at the end of the summer. They will then represent the owner operator faction in how we will work with them throughout the rest of the pilot test since each of them will come from a different, single location.

Pilots Two and Three: Long haul drivers from a small company and a large company
Long haul drivers represent the majority of the industry, so we suggest they represent two of the pilot groups. We divided them by company size. They track quite differently through the suggested core program, with one receiving the minimum program, and one receiving the "Cadillac" program with all of the options. This will show us if and how any of the options can be implemented and if and how this affects their health outcome.

Pilot Four: Local/short haul drivers
Short haul drivers return to their home base daily. This gives them different options than a long haul driver. We would like to test the availability of on-site coaching with this group and use of a local exercise facility.

Pilot Five: Bus drivers
This is a unique subset of drivers, which need to be tested as their own group.

Pilot Six: Truck stop employees
Working with truck stop employees reaches the drivers environment, which must be done if we are to successfully help the driver. As they become healthier and motivated, they can influence drivers.

Figure Twenty-one: Core Program Pilot One - America's Road Team

**Phase I:
Recruitment**

Project
Committee

| Industry magazines | Radio | Audio Magazine |

Pilot Company

| Newsletter article for company publications | Postcard | Poster | Audio Magazine | CEO Letter | Brochure |

Join

Introduction and
Health Assessment

**Phase II:
Introduction**

Individual
Brochure +
Audio + Video

Group
Brochure + Audio +
Seminar (speaker or video)

| Health Assessment (Lifestyle/Physical/Goal setting) Truck Stop | Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical/Goal setting) On Site |

Information Package
Booklet + Audio + Video + Internet

Coaching

| Yes Weekly Telephone | Yes Monthly Onsite | No |

**Phase III:
Action**

Snack Pack

| Yes Terminal | Yes Mail | Yes Truck Stop | No |

Exercise membership

| Yes On-site | Yes Truck Stop | Yes Community | No |

Reassessment

**Phase IV:
Evalulation**

| Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical) Truck Stop | Health Assessment (Lifestyle/Physical) On-Site |

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Figure Twenty-two: Core Program Pilot Two - Long Haul. Small Company

Project Committee

| Industry magazines | Radio | Audio Magazine |

Pilot Company

| Newsletter article for company publications | Postcard | Poster | Audio Magazine | CEO Letter | Brochure |

Join

Introduction and Health Assessment

| **Individual** Brochure + Audio + Video | **Group** Brochure + Audio + Seminar (speaker or video) |

| Health Assessment (Lifestyle/Physical/Goal setting) Truck Stop | Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical/Goal setting) On Site |

Information Package Booklet + Audio + Video + Internet

Coaching

| Yes Weekly Telephone | Yes Monthly Onsite | No |

Snack Pack

| Yes Terminal | Yes Mail | Yes Truck Stop | No |

Exercise membership

| Yes On-site | Yes Truck Stop | Yes Community | No |

Reassessment

| Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical) Truck Stop | Health Assessment (Lifestyle/Physical) On-Site |

Phase I: Recruitment

Phase II: Introduction

Phase III: Action

Phase IV: Evaluation

Figure Twenty-Three: Core Program Pilot Three - Long Haul. Large Company

```
                              ┌──────────────────┐
                              │     Project      │
                              │    Committee     │
                              └──────────────────┘
              ┌──────────────────────┬──────────────────────┐
      ┌───────────────────┐  ┌──────────────┐  ┌─────────────────┐
      │ Industry magazines│  │    Radio     │  │  Audio Magazine │
      └───────────────────┘  └──────────────┘  └─────────────────┘
```

Phase I: Recruitment

```
                              ┌──────────────────┐
                              │   Pilot Company  │
                              └──────────────────┘
```

| Newsletter article for company publications | Postcard | Poster | Audio Magazine | CEO Letter | Brochure |

```
                              ┌──────────────────┐
                              │       Join       │
                              └──────────────────┘
                              ┌──────────────────┐
                              │ Introduction and │
                              │ Health Assessment│
                              └──────────────────┘
```

Phase II: Introduction

| **Individual** Brochure + Audio + Video | **Group** Brochure + Audio + Seminar (speaker or video) |

| Health Assessment (Lifestyle/Physical/Goal setting) Truck Stop | Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical/Goal setting) On Site |

```
                    ┌──────────────────────────────┐
                    │    Information Package        │
                    │ Booklet + Audio + Video +     │
                    │          Internet             │
                    └──────────────────────────────┘
                    ┌──────────────────┐
                    │     Coaching     │
                    └──────────────────┘
```

| Yes Weekly Telephone | Yes Monthly Onsite | No |

Phase III: Action

```
                    ┌──────────────────┐
                    │    Snack Pack    │
                    └──────────────────┘
```

| Yes Terminal | Yes Mail | Yes Truck Stop | No |

```
                    ┌──────────────────────┐
                    │  Exercise membership │
                    └──────────────────────┘
```

| Yes On-site | Yes Truck Stop | Yes Community | No |

```
                    ┌──────────────────┐
                    │   Reassessment   │
                    └──────────────────┘
```

Phase IV: Evalulation

| Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical) Truck Stop | Health Assessment (Lifestyle/Physical) On-Site |

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Figure Twenty-Four: Core Program Pilot Four - Short Haul

Phase I: Recruitment

Project Committee

- Industry magazines
- Radio
- Audio Magazine

Pilot Company

- Newsletter article for company publications
- Postcard
- Poster
- Audio Magazine
- CEO Letter
- Brochure

Phase II: Introduction

Join

Introduction and Health Assessment

- **Individual** Brochure + Audio + Video
- **Group** Brochure + Audio + Seminar (speaker or video)

- Health Assessment (Lifestyle/Physical/Goal setting) Truck Stop
- Health Assessment (Lifestyle only)
- Health Assessment (Lifestyle/Physical/Goal setting) On Site

Information Package
Booklet + Audio + Video + Internet

Phase III: Action

Coaching

- Yes Weekly Telephone
- Yes Monthly Onsite
- No

Snack Pack

- Yes Terminal
- Yes Mail
- Yes Truck Stop
- No

Exercise membership

- Yes On-site
- Yes Truck Stop
- Yes Community
- No

Phase IV: Evaluation

Reassessment

- Health Assessment (Lifestyle only)
- Health Assessment (Lifestyle/Physical) Truck Stop
- Health Assessment (Lifestyle/Physical) On-Site

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Figure Twenty-Five: Core Program Pilot Five - Bus Company

Project Committee

Industry magazines | Radio | Audio Magazine

Pilot Company

Newsletter article for company publications | Postcard | Poster | Audio Magazine | CEO Letter | Brochure

Join

Introduction and Health Assessment

Individual
Brochure + Audio + Video

Group
Brochure + Audio + Seminar (speaker or video)

Health Assessment (Lifestyle/Physical/Goal setting) Truck Stop | Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical/Goal setting) On Site

Information Package
Booklet + Audio + Video + Internet

Coaching

Yes Weekly Telephone | Yes Monthly Onsite | No

Snack Pack

Yes Terminal | Yes Mail | Yes Truck Stop | No

Exercise membership

Yes On-site | Yes Truck Stop | Yes Community | No

Reassessment

Health Assessment (Lifestyle only) | Health Assessment (Lifestyle/Physical) Truck Stop | Health Assessment (Lifestyle/Physical) On-Site

Phase I: Recruitment

Phase II: Introduction

Phase III: Action

Phase IV: Evalulation

Figure Twenty-Six: Core Program Pilot Six - Truck Stop Company

Phase I: Recruitment

Project Committee

- Industry magazines
- Radio
- Audio Magazine

Pilot Company

- Newsletter article for company publications
- Postcard
- Poster
- Audio Magazine
- CEO Letter
- Brochure

Phase II: Introduction

Join

Introduction and Health Assessment

Individual
Brochure + Audio + Video

Group
Brochure + Audio + Seminar (speaker or video)

- Health Assessment (Lifestyle/Physical/Goal setting) Truck Stop
- Health Assessment (Lifestyle only)
- Health Assessment (Lifestyle/Physical/Goal setting) On Site

Information Package
Booklet + Audio + Video + Internet

Coaching

- Yes Weekly Telephone
- Yes Monthly Onsite
- No

Phase III: Action

Snack Pack

- Yes Terminal
- Yes Mail
- Yes Truck Stop
- No

Exercise membership

- Yes On-site
- Yes Truck Stop
- Yes Community
- No

Phase IV: Evalulation

Reassessment

- Health Assessment (Lifestyle only)
- Health Assessment (Lifestyle/Physical) Truck Stop
- Health Assessment (Lifestyle/Physical) On-Site

Phase I: Recruitment Industry - Individual

Industry Wide Awareness

Why

- **Create an awareness and interest in health and wellness within the industry**
- **Prepare the industry for total program roll out**
- **Initiate recruitment of employees from participating pilot projects**

How

- **Publish articles in industry magazines, August, 1998**
  - » CCJ Eileen Cleaves – follow up to 'Heart of a Driver' article which ran in April (see Appendix four)
  - » Private Carrier (NPTC)
  - » Land Line
  - » Overdrive Charles Cox - follow up to 'Matters of the Heart' article which ran in April (see Appendix Four)

- **Broadcast radio spots and unpaid on air interviews during late night radio, August, 1998**
  - » Bill Martin- Produce Reporter
  - » Bill Mack Show from WBAP in Arlington, TX
  - » The Road Gang from WWL in New Orleans, LA

- **Tape interview on Super Driver to be aired August, 1998**
  - » Interview key spokespersons
  - » Initiate recruitment process (i.e., Be watching to see if your company…..)

Driver Recruitment By Pilot Projects

Why

- **Involve company in health and wellness process**
- **Peak interest and awareness in the concept of health and wellness and its importance to the individual driver and their family**
- **Explain the program**
- **Test various marketing pieces**
- **Offer pilot companies turn-key marketing materials to recruit employee participation**

How

- **Newsletter Article – Strategy # 1**
  - » Provide article to pilot companies who have an in-house newsletter – topics include:
    - – Health and wellness overview
    - – Program outline
    - – Sign up procedure
  - » Provide in July for publication in August, 1998, and September, 1998, newsletters

- **Postcard – Strategy # 2A**
  - » Encourage drivers to watch for upcoming program
  - » Provide registration information
  - » Distribute by mailing to the home, via company mail, or with paychecks during the 1st week of September

- **Poster – Strategy # 2B**
  - » Display large poster (17" x 22") in appropriate company locations to coincide with postcard distribution during month of September, 1998
  - » Encourage drivers to watch for upcoming program and introductory information
  - » Provide registration information
  - » Provide space to personalize poster with information pertinent to company

- **Audio Tape –Strategy # 3**
  - » Distribute special Super Driver audio tape which has been personalized for pilot companies to assist in recruitment purposes
  - » Encourage drivers to participate in program
  - » Include interviews with industry spokesperson(s) and project personnel
  - » Distribute during 2nd week of September, 1998

- **CEO Letter – Strategy # 4A**
  - » Send letter from company CEO or other executive inviting drivers to participate
  - » Provide letter copy to companies for use on their letterhead
  - » Distribute by mailing to the home, via company mail, or with paycheck during 3rd week of September, 1998
  - » See sample, Appendix five

- **Brochure – Strategy # 4B**
  - » Provide drivers with program specifics:
    - – Benefits of program
    - – Explanation of program
    - – Topics covered by program
    - – Registration instructions
  - » Distribute with CEO letter by mailing to the home, via company mail, or with paycheck during 3rd week of September, 1998

Phase II: Introduction

Introduction – Individual or Group

Why

- **Introduce the health and wellness concept to participants who have signed up for the program during recruitment phase**
- **Introduce and provide basic information on the 4 feature topics (4 R Road Challenge):**
  - » Refueling
  - » Relating
  - » Relaxing
  - » Rejuvenating
- **Introduce importance of family involvement**
- **Explain how pilot program will work**
- **Test four different combination methodologies**

How
- **Conduct group introductory session at each pilot company in a seminar format with speaker from Sue Roberts Health Concepts (if speaker is not possible, video described below to be used)**
  - » Present in October, 1998
  - » Invite executives from the company
  - » Invite families and provide an incentive (as determined by company) for them to attend
  - » Devise interactive seminar for approximately 45 minutes using power point or overheads
  - » Provide training for company representative if company uses video instead of onsite speaker
  - » Distribute materials that can be used by driver after seminar as reinforcement of information presented in the seminar:
    - – Video – 45 minute high quality taping and edited version of a group seminar
    - – Brochure – Enhanced version of recruitment brochure
    - – Audio – 20-30 minute version of the seminar
- **Provide for driver who cannot participate in a group session, the introductory information through video, audio and brochure (as described above) to watch, listen to, and read on own.**
  - » Distributed during the month of October, 1998
  - » Family will be encouraged to watch, listen to, and read the material either with driver or separately

Health Assessment

Why

- **Collect current belief, behavior, knowledge and physical data of pilot participants to use as baseline for evaluation**
- **Provide information to participants to motivate them to participate fully in program**
- **Test variables with regard to assessment (i.e., location)**
- **Determine advisability of using various methods in national rollout**

How

- **Offer Lifestyle Written Assessment during introductory session**
  - » Use paper and pencil format (standardized)
  - » Ask demographic, history, belief, behavioral and knowledge questions
  - » Use format to make data available to both participant and project
  - » Assure confidentiality by assigning a code number to each report
  - » Reveal only group data to company
  - » Tabulate data for baseline information
  - » Minimum assessment - everyone to receive
  - » See sample, Appendix six

- **Conduct Physical Assessment during introductory session to include:**
  - » Body weight
  - » Height
  - » BMI Index (calculated)
  - » Blood pressure
  - » Pulse
  - » Blood total cholesterol
  - » Blood HDL cholesterol
  - » Cholesterol/HDL Ratio (calculated)
  - » Blood glucose
  - » Aerobic fitness test
  - » Strength test
  - » Flexibility test
  - » Insure ability to take tests by completion of medical history and signed release
  - » Conduct assessments onsite at company facility where introductory session is being held or at a truck stop
  - » Maintain minimal variability by utilizing the same individuals (whenever possible) to do the actual testing -- where others are performing assessments, complete procedures and guidelines will be given, (see Appendix seven)
  - » Assure confidentiality as outlined above for the Lifestyle Written Assessment
  - » Optional assessment component
  - » Tabulate data for baseline information

» Collection of data on standardized form along with history and release (see Appendix eight) where data is available to both participant and project

» Reveal only group data to company

- **Provide Goal Setting and Coaching as final dimension of health assessment**
  » Explain results of test to participant
  » Help participant determine goals and how to proceed in Action Phase
  » Assure confidentiality as outlined above for the Lifestyle Written Assessment
  » Collection of data on standardized form (see appendix nine)
  » Optional assessment component

Phase III: Action

Information Package

Why

- **Begin process of improving behaviors and health of drivers**
- **Provide information on health topics in formats (print, audio, and video) requested by drivers in survey**
- **Provide information addressing issues and concerns of drivers as reported in survey**
- **Provide information addressing both 'on the road' life and 'at home' life of driver**
- **Provide information using a style and format appropriate for driver population**

How

- **Provide a comprehensive interactive information booklet**
  » Offer as a component of the Information Package to all participants
  » Address topics determined of most concern to drivers :
    − Refueling
    − Relating
    − Relaxing
    − Rejuvenating
  » Provide information to driver to use when they are on the road as well as when they are at home
  » Follow format in which participant will read and do activities at their own pace, with the goal of finishing in four months (pilot length)
  » Distribute as part of the Information Package to participants during Introductory session
  » Develop into 4 R Road Challenge theme for year one
  » Use a modification of the Transtheoretical model for behavior change as described by Prochaska and Dacher's integrated healing model for each topic

- **Information booklet outline follows**

	Tell Me About It. Stage 1	Maybe, I should. I could. Stage 2	What do I need to do? Stages 3-4	What's next? Stages 5-6
Refueling	How eating affects health	Pros and cons of eating healthy	Healthy eating: on the road At home	Dealing with triggers Support system
Relating	Health value of relationships	Productive vs. nonproductive relationships	Improve relationships with better communication skills	Nurturing relationships
Relaxing	Health value of relaxation	Issues: Road rage Boredom Difficult people	Relaxation techniques: Short term Long term	Strategies for staying in control Dealing with triggers
Rejuvenating	Health value of movement and exercise	Pros and cons of exercise	Exercise Interest Inventory How to do it	Support system

- **Provide audio cassettes**
  - » Provide 4 different 30-60 minute audio tapes – one for each topic
    - – Refueling – questions and answers interview and testimonials
    - – Relaxing – a relaxation/meditation tape
    - – Relating – role model conversations on communication skills, problem solving, family tips
    - – Rejuvenating – exercise/walking tape, warm up, breathing
  - » Design tapes for use by participants at own pace, based on needs
  - » Use industry spokesperson and other drivers for majority of audio talent
  - » Distribute as part of the Information Package to participants during Introductory Session

- **Provide video**
  - » Offer as a component of the Information Package to all participants
  - » Design as two-hour video with approximately 30 minutes devoted to each of the topics:
    - – Refueling
    - – Relaxing
    - – Relating
    - – Rejuvenating
  - » Design to complement information as provided in the booklet and audio cassettes
    - – Use industry spokespersons and drivers as majority of talent

- – Distribute as part of Information Package to participants during Introductory session

- **Provide Internet option**
  - » Offer internet option with same information as provided in Information Package for participants who would prefer this format

Coaching

Why

- **Provide opportunity for drivers to form relationship with health professional who can help them with lifestyle changes**
- **Assist drivers in setting their goals**
- **Implement system of contact and support with driver which has been shown to improve outcome**
- **Test systems** of coaching to determine feasibility for national program

How

- **Offer option of personal coaching to each driver at introductory session**
- **Offer option of telephonic coaching to those who choose to work with a coach**
  - » Offer weekly contact for 20 minutes with coach for four months
  - » Provide coach from staff of Sue Roberts Health Concepts (individual who does assessment in introductory phase if possible)
  - » Provide telephone card for driver to use for coach call

- **Offer option of on-site, one-on-one coaching to those who choose to work with a coach**
  - » Possible coaches from companies who have wellness staff trained in core program
  - » Possible coaches from staff of Sue Roberts Health Concepts
  - » Offer monthly contact with coach for 30 minutes

Snack Pack

Why

- **Improve health by giving access to nutritious snacks**
- **Address snack issue - drivers do carry snacks, but not necessarily a healthy eating option (from survey)**
- **Acknowledge driver topic of concern eating and weight (from survey)**

How

- **Offer boxed snack pack weekly with 5 servings vegetables, 5 servings fruit, 5 servings grain, examples:**

Vegetable	Fruit	Grain
V-8 Juice	Juices	Whole grain crackers
Tomato juice	Dried fruit	Graham crackers
Baby carrots	Fresh fruit	Fig Newtons

- **Distribute snack pack at company terminal or at truck stops**
- **Provide system to reimburse driver for cost of snack packs purchased at truck stops**
- **Work with outside company to provide snack pack**
- **Make snack pack participation optional**
- **Determine availability with pilot companies**

Exercise Membership

Why

- **Improve health of drivers by providing access to exercise facilities**
- **Address an area where drivers report they need improvement in behavior, but find access difficult**

How

- **Offer exercise membership options**
    - » Rolling Strong™ membership for drivers who choose truck stop exercise
    - » Company exercise facility for drivers whose company have these available
    - » Local membership at community facilities such as the YMCA
- **Make exercise membership participation optional**

Phase IV: Evaluation

Health Assessment

Why

- **Collect post-pilot data on belief, behavior, knowledge and physical data of pilot participants to use for evaluation of pilot projects**
- **Review data to determine advisability of program specifics for national rollout**

How

- **Repeat Lifestyle Written Assessment pilot participants**
  - » Use paper and pencil format (standardized)
  - » Ask demographic, history, belief, behavioral and knowledge questions
  - » Use format to make data available to both participant and project
  - » Assure confidentiality by assigning a code number to each report
  - » Reveal only group data to company
  - » Tabulate data for comparison to baseline data
  - » Minimum assessment - everyone to receive

- ♦ **Repeat Physical Assessment with pilot participants**:
  - » Body weight
  - » Height
  - » BMI Index (calculated)
  - » Blood pressure
  - » Pulse
  - » Blood total cholesterol
  - » Blood HDL cholesterol
  - » Cholesterol/HDL Ratio (calculated)
  - » Blood glucose
  - » Aerobic fitness test
  - » Strength test
  - » Flexibility test
  - » Insure ability to take tests by completion of medical history and signed release
  - » Conduct assessments onsite at company facility where follow-up session is being held or at a truck stop
  - » Maintain minimal variability by utilizing the same individuals (whenever possible) to do the actual testing -- where others are performing assessments, complete procedures and guidelines will be given
  - » Assure confidentiality as outlined above for the Lifestyle Written Assessment
  - » Collection of data on standardized form along with history and where data is available to both participant and project
  - » Reveal only group data to company
  - » Tabulate data for comparison to baseline data

- **Provide Goal Setting and Coaching as final dimension of health assessment**
  - » Explain results of test to participant
  - » Help participant evaluate progress
  - » Assure confidentiality as outlined above for the Lifestyle Written Assessment
  - » Tabulate data as to goal attainment