

Final Performance Report  
Health Services Research in Occupational Health

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## **I. ABSTRACT**

There has been concern about the rising premiums paid by employers for workers' compensation insurance and possible overuse by workers. It is widely assumed in the business community and by many policy makers that there are a great many people who apply for workers' compensation benefits and do not deserve them but very few who are entitled to benefits but do not apply.

We examined a state wide occupational surveillance system that receives reports from individual health care practitioners, hospitals, clinic and employer based health care practitioners. Reporting is required and approximately 20,000 occupational illnesses are received a year. We used both personal interviews and matching of state wide data bases to conduct our study.

We found that most workers reported with an occupational disease did not apply for workers' compensation. This was true whether the work-related disease was a chronic disease with long latency (ie. asbestosis or silicosis) or a more acute disease such as repetitive motion injury. Overall, only 25% of workers diagnosed as having a work-related disease applied for workers' compensation.

We conducted more in depth analysis of why workers with work-related musculoskeletal disease did not file. Factors associated with filing included increased length of employment, lower annual income, dissatisfaction with co-workers, physical restrictions on activity, type of physician providing treatment, off work  $\geq 7$  days, decreased current health status and increased severity.

The significance of our findings are that analyses of the burden of work-related illnesses that rely solely on worker compensation data bases markedly underestimate the true burden of occupational illness. Our results are useful in assessing the true burden of occupational diseases.

Programs that evaluate the burden of occupational illnesses and/or the efficacy of preventive interventions will obtain a more accurate and complete picture if they use a more comprehensive surveillance system than a worker compensation claim data base.

## **II. SIGNIFICANT FINDINGS**

By matching the occupational disease reports with the workers' compensation claim file we found that 9 to 45% of reported workers filed for benefits. Data limitations prevented a more precise estimate of this rate, but a large proportion of workers with occupational illnesses clearly did not utilize the workers' compensation system. Logit analysis of a choice-based sample showed that women and employees of small firms were more likely than others to file for workers' compensation and that filing rates varied considerably across industries and diagnostic categories. Acute conditions related to the current job were no more likely to lead to claims than chronic conditions with long latency periods between exposure and development of disease.

An indepth interview of workers diagnosed with work-related back, shoulder or arm repetitive trauma showed that only 25% of workers filed a workers' compensation claim. The factors significantly associated with filing a claim were increased length of employment (>21 years O.R. 3.01 (95% CL 1.31-6.90), 11-20 yrs. O.R. 2.34 (95% CL 1.01-5.47), 6-10 yrs O.R. 1.76 (95% CL 0.73-4.25), 1-5 years O.R. 2.36 (95%CL 1.03-5.42) vs. < 1 year O.R. 1.00); lower annual income (<\$40,000 O.R. 1.75 (95% CL 1.06-2.88) versus  $\geq$  \$80,000 O.R. 1.00); workers dissatisfaction with co-workers (O.R. 1.76 (95% 1.01-3.06)); physician restriction on activity (O.R. 2.16 (95% CL 1.55-3.00)); type of physician providing treatment (specialist including surgeon or orthopedist O.R. 3.63 (95% CL 2.37-5.55); physical and occupational therapist O.R.

2.15 (95% CL 1.35-3.43), family practitioner O.R. 1.33 (95% CL 0.89-2.01 vs. company physician O.R. 1.00)); off work  $\geq$  7 days (O.R. 14.85 (95% 10.57-20.85)); decreased current health status (O.R. 0.82 (95% CL 0.70-0.96)) and increased severity of illness (O.R. 1.24 (95% CL 1.06-20.99)).

This study showed that only 25% of workers with a work-related musculoskeletal condition filed for workers' compensation and refuted the common perception that an individual with a work related problem is likely to file a workers' compensation claim. The strongest predictors of who filed were those factors associated with the severity of the condition. Other factors were increasing length of employment, lower annual income and worker dissatisfaction with co-workers. Our study population consisted mainly of unionized auto workers and our findings may not be generalizable to the total workforce.

### **III. USEFULNESS OF FINDINGS**

The 1990s have seen legislative reforms of workers' compensation laws in many states. Two recent publications have reviewed the statutory changes and their impact on the system. Both the reviews point out that an important component of recent changes has been limits on the compensability. These limits have come in a variety of forms including limiting the compensability of certain conditions such as repetitive trauma disorder and mental disabilities, limitations of the compensation for the aggravation of preexisting conditions, and procedural and evidentiary changes which make it more difficult to prove compensability.

The rationale for these changes has been based on anecdotal evidence and arguments that the cost is too high rather than any empirical evidence that inappropriate people are being

compensated. Indeed, there has been very little research (other than cost data) which sheds light on the questions of whether definitions of compensability are too broad or too narrow. Such research is of course very difficult to do because most workers' compensation research is based on administrative databases which include information only about the people who received benefits or made a formal claim for benefits but do not make any attempt to include the universe of people who might be entitled to benefits. The surveillance database maintained by the state of Michigan, which was the basis for this study, provided a unique opportunity in this regard.

Our findings will no doubt come as a surprise to policymakers who have seen fit over recent years to restrict compensability. To those whose primary objective is controlling the cost of the system, these findings will raise concern because they suggest the possibility that given proper education and opportunities, there are significantly more people who may be entitled to workers' compensation benefits.

To those whose primary concern is the provision of adequate benefits to workers, these findings will reinforce their concern that recent reforms may be depriving injured individuals of benefits under workers' compensation acts. Some have argued that the net effect of the recent decade of reform has been to emphasize the affordability of costs over the adequacy of benefits to injured workers. Although many of the people who did not claim benefits had relatively less severe disabilities, there were nevertheless 450 (37.7%) individuals who did not file even though they felt they had a serious enough condition to file a claim.

This study has demonstrated that efforts to evaluate the burden of occupational disease and/or target intervention cannot solely rely on worker compensation data.

## **IV. SCIENTIFIC REPORT**

### **Specific Aims**

1. Examine the factors that predict whether a worker with an occupationally caused repetitive motion injury will file a workers' compensation claim.
2. Examine the full economic and social costs of having an occupationally caused repetitive motion injury, comparing those costs for workers who do and do not file a workers' compensation claim.

### **Sample Selection**

A sample of 2,703 employees was selected to be surveyed from the Michigan Occupational Disease Reporting Data Base. In order to maximize the possibility that employees would remember events/feelings and attitudes that occurred at the time of their occupational injury interviews were conducted within 3-4 weeks after an occupational disease report was received. Individuals with neck, back or upper extremity repetitive trauma were selected each week. Initially, if more than 150 reports were received in a given week, then 150 individuals were randomly selected from the total number received that week. As our efficiency in interviewing increased, we were able to increase the number of interviews to all reports received that week.

### **Design and Test Employee Survey**

A copy of the employee survey we used is in Appendix I. The source of each question is indicated. The questionnaire was pilot tested on 12 employees and then modified before its final use.

### **Occupational Disease Reports/Workers' Compensation File Match**

Occupational disease reports received by the State of Michigan from 1992-1994 were matched with Worker Compensation Claim Files maintained by the state of Michigan. There were 30,899 individuals for whom an occupational disease report was received for whom an attempt was made to match with the worker compensation file. An individual was considered a definite match if the name, social security number and disease category matched. An individual was considered a possible match if the name and social security matched but the worker compensation file had no information on disease. The results were published in 1998. See Appendix II for a copy of the publication. A large percentage of individuals who are reported as having an occupational illness are not applying for workers' compensation.

### **Employee Survey**

The number of employees interviewed, the number unreachable and the number who refused to be interviewed is shown in Table I.

### **Design and Test Employer Survey**

An employer survey was developed. The employer survey was divided into a phone and a written component. Seventy-five percent of the survey was collected over the phone. After completion of the phone interview the written part of the survey which requested specific numbers regarding wages and number of personnel was sent to the company. Because of the need for specific numbers which would not be immediately available to the person responding on the phone we elected to collect the final information in a format where the information could be looked up

by the individual responding. A copy of the employer survey is in Appendix III.

### **Conduct Employer Survey**

The 57 employers where the 1,598 employees who were interviewed had worked were contacted. Fifty employees completed the survey. A copy of the report submitted to the 50 participating employers is in Appendix IV.

### **Resurvey Employees**

We attempted to resurvey all 1,598 individuals who completed the first survey. We were able to resurvey 1,118 individuals. The number of employees interviewed a second time, the number unreachable, and the number who refused to be interviewed a second time is shown in Table II. A copy of the second survey is in Appendix V.

### **Data Match MESC and Workers' Compensation**

Arrangements were made with the Michigan Employment Security Commission (MESC) to obtain the quarterly financial data collected on all Michigan residents receiving wages. This allowed us to calculate loss wages. We received financial data on the 1,598 employees who completed the survey as well as the 1,105 employees who did not.

Arrangements were also made to match the 2,703 individuals in the original cohort with the state worker compensation data base of claims filed for lost time. This allowed us to check on whether there was a record of an individual filing a workers' compensation and compare the official filing record with the self reports obtained by interview. It also allowed us to compare

respondents to non-respondents.

## V. PUBLICATIONS/PRESENTATIONS

A list of publications and presentations follows. A copy of publications to date is in Appendix II. Our initial results were reported by the Bureau of National Affairs in their Workers' Compensation Report 1997; 8:650-651 and the National AFL-CIO Workers' Compensation Notes (copies attached in Appendix VI).

### Publications

Biddle J, Roberts K, Rosenman KD, Welch EM. What Percentage of Workers with Work-Related Illnesses Receive Workers' Compensation Benefits? *J Occup Environ Med* 1998; 40:325-331.

Rosenman KD, Gardiner JC, Wang, Biddle J, Hogan A, Reilly MJ, Roberts K, Welch E. Why Most Workers with Occupational Repetitive Trauma do Not File for Workers' Compensation. *J Occup Environ Med* 2000; (in press).

Welch E. Some Workers Don't File. *On Workers' Compensation* 1997; 7:1-4.

Welch E. Fear Of Filing Why Some Workers do not File for Work. Comp. *On Workers' Compensation* 1998; 8:10-11.

Table I. Summary of Response Rate for First Employee Survey

Occupational disease reports	2703	
Not reachable by phone	490	
Not able to complete (Disease or Language)	34	
Eligible cohort	2179	
Refusals	581	(26.7%)
Interviewed	1598	(73.3%)

Table II. Summary of Response Rate for Second Employee Survey

Completed first survey	1598	
Not reachable by phone	261	
Not able to complete (Dead, too ill)	11	
Eligible cohort	1326	
Refusals	208	(15.7%)
Interviewed	1118	(84.3%)

# Appendix I

## SURVEY OF INJURED WORKERS

(Numbers at the end of each question refer to reference number on reference list. If there is no number, the question is original to this survey)

U1 Before we begin, let me tell that this interview is completely voluntary. Should we come to any question that you do not want to answer, just let me know and we will go onto the next question.

V1 I would first like to verify that your social security number is:

Is this information correct?

- 1 YES
- 5 NO

A2 What led up to the problem with your (injury)?

- 1 RESULT OF A SINGLE EVENT OR ACCIDENT
- 2 RESULT OF A SERIES OF REPEATED EVENTS OR ACCIDENTS
- 3 OTHER: SPECIFY[specify]

A3 Was the problem with your (injury) the re-occurrence of a previous injury?

- 1 YES
- 5 NO

‡ When did you most recently experience pain in your (injury)?

Month-Day-Year

A4b Would you say it was more than one month but less than three months ago, more than three months but less than six months ago, more than six months ago but less than one year ago, at least one year ago or several years ago?

- 1 MORE THAN ONE MONTH BUT LESS THAN THREE MONTHS AGO
- 2 MORE THAN THREE MONTHS BUT LESS THAN SIX MONTHS AGO
- 3 MORE THAN SIX MONTHS AGO BUT LESS THAN ONE YEAR AGO
- 4 AT LEAST ONE YEAR AGO
- 5 SEVERAL YEARS AGO

H1 Throughout this interview, I will be asking you questions about your (injury). But first, I'd like to ask you some general questions about your health. (16)

In general, would you say your health is excellent, very good, good, fair or poor?

- 1 EXCELLENT
- 2 VERY GOOD
- 3 GOOD
- 4 FAIR
- 5 POOR

‡ Next, I would like to ask you some questions about health limitations you may have.

Would you say your health has limited you in doing vigorous activities such as running, lifting heavy objects, or participating in strenuous sports for more than 3 months, for 3 months or less, or not at all? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

H2a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H3 Would you say your health has limited you in doing moderate activities such as moving a table, carrying groceries, or bowling for more than 3 months, for 3 months or less, or not at all? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

H3a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H4 (Would you say your health has limited you in . . . .) walking uphill or climbing a few flights of stairs (for more than 3 months, for 3 months or less, or not at all)? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

.14a Would you say that this limitation is at all a result of your (injury) injury? (16)

- 1 YES
- 5 NO

H5 (Would you say your health has limited you in . . . .) bending, lifting, or stooping (for more than 3 months, for 3 months or less, or not at all)? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

H5a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H6 (Would you say your health has limited you in . . . .) walking one block (for more than 3 months, for 3 months or less, or not at all)? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

'46a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H7 (Would you say your health has limited you in ...) eating, dressing, bathing, or using the toilet

(for more than 3 months, for 3 months or less, or not at all)? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

H7a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H8 Would you say your health kept you from working at a job, doing work around the house or going to school for more than 3 months, for 3 months or less, or not at all? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

H8a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H9 Have you been unable to do certain kinds or amounts of work, housework, or schoolwork because of your health for more than 3 months, for 3 months or less, or not at all? (16)

- 1 LIMITED FOR MORE THAN 3 MONTHS
- 2 LIMITED FOR 3 MONTHS OR LESS
- 3 NOT LIMITED AT ALL

H9a Would you say that this limitation is at all a result of your (injury) injury?

- 1 YES
- 5 NO

H10 How much bodily pain have you had during the past four weeks? (16)  
Would you say no pain, very mild, mild, moderate, severe or very severe pain?

- 0 NO PAIN
- 1 VERY MILD
- 2 MILD
- 3 MODERATE
- 4 SEVERE
- 5 VERY SEVERE

H10a Is this pain partly, completely, or not at all related to your (injury) injury?

- 0 NOT AT ALL
- 1 PARTIALLY
- 2 COMPLETELY

H11 In the past month, how much of the time has your health limited your social activities such as visiting with friends or close relatives? (16)

- 1 ALL OF THE TIME
- 2 MOST OF THE TIME
- 3 A GOOD BIT OF THE TIME
- 4 SOME OF THE TIME
- 5 A LITTLE OF THE TIME

6 NONE OF THE TIME

H12 In the past month how much of the time have you been very nervous or anxious? (16)

- 1 ALL OF THE TIME
- 2 MOST OF THE TIME
- 3 A GOOD BIT OF THE TIME
- 4 SOME OF THE TIME
- 5 A LITTLE OF THE TIME
- 6 NONE OF THE TIME

H13 In the past month how much of the time have you felt calm and peaceful? (16)

- 1 ALL OF THE TIME
- 2 MOST OF THE TIME
- 3 A GOOD BIT OF THE TIME
- 4 SOME OF THE TIME
- 5 A LITTLE OF THE TIME
- 6 NONE OF THE TIME

H14 In the past month how much of the time have you felt down-hearted or blue? (16)

- 1 ALL OF THE TIME
- 2 MOST OF THE TIME
- 3 A GOOD BIT OF THE TIME
- 4 SOME OF THE TIME
- 5 A LITTLE OF THE TIME
- 6 NONE OF THE TIME

H15 In the past month how much of the time have you been a happy person? (16)

- 1 ALL OF THE TIME
- 2 MOST OF THE TIME
- 3 A GOOD BIT OF THE TIME
- 4 SOME OF THE TIME
- 5 A LITTLE OF THE TIME
- 6 NONE OF THE TIME

H16 In the past month how often have you felt so down in the dumps that nothing could cheer you up? (16)

- 1 ALL OF THE TIME
- 2 MOST OF THE TIME
- 3 A GOOD BIT OF THE TIME
- 4 SOME OF THE TIME
- 5 A LITTLE OF THE TIME
- 6 NONE OF THE TIME

H17 For each of the following statements, please tell me is each is definitely false, mostly false, mostly true or, definitely true for you. (2)

I am somewhat ill.

- 1 DEFINITELY FALSE
- 2 MOSTLY FALSE
- 4 MOSTLY TRUE

5 DEFINITELY TRUE

H18 I am as healthy as anybody I know. (2)

- 1 DEFINITELY FALSE
- 2 MOSTLY FALSE
- 4 MOSTLY TRUE
- 5 DEFINITELY TRUE

H19 My health is excellent. (2)

- 1 DEFINITELY FALSE
- 2 MOSTLY FALSE
- 4 MOSTLY TRUE
- 5 DEFINITELY TRUE

H20 I have been feeling bad lately. (2)

- 1 DEFINITELY FALSE
- 2 MOSTLY FALSE
- 4 MOSTLY TRUE
- 5 DEFINITELY TRUE

Next, I would like to ask you some questions about tobacco usage.

H21 Have you ever smoked cigarettes regularly? (Adapted from 17)

- 1 YES
- 5 NO

H22 Have you smoked cigarettes in the last month? (Adapted from 17)

- 1 YES
- 5 NO

*Ask these questions only if individual is coded as having a back problem.*

I am now going to read some sentences that may describe people when they have a back or neck problem or leg pain. When I read them, you may find that some stand out because they describe you and your behavior today because of your back or neck problem or leg pain. As I read the list, think of yourself today. When I read a sentence that currently describes you, please respond by saying yes. If the sentence does not currently describe you, please respond by saying no. (All questions in this section are from 22)

B1 Because of my back or neck problem, I change positions frequently to try and get my back comfortable.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

2 I stay at home most of the time because of my back or neck problem.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B3 I walk more slowly than usual because of my back or neck problem.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B4 (Because of my back or neck problem), I am not doing any of the jobs that I usually do around the house.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B5 (Because of my back or neck problem), I use a railing to get upstairs.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B6 (Because of my back or neck problem), I have to hold on to something to get out of an easy chair.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B7 I get dressed more slowly than usual (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B8 I only stand for short periods of time (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B9 I try not to bend or kneel down (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B10 (Because of my back or neck problem), I find it difficult to turn over in bed.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B11 My back or neck is painful almost all of the time.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

2 (Because of my back or neck problem), I find it difficult to get out of chairs.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B13 (Because of my back or neck problem), I have trouble putting on my socks or stockings.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B14 I only walk short distances (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B15 I sleep less well (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B16 I avoid heavy jobs around the house (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B17 (Because of my back or neck problem), I am more irritable and bad tempered with other people than usual.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B18 (Because of my back or neck problem), I go upstairs more slowly than usual.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B19 (Because of my back or neck problem), I stay in bed most of the time.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B20 (Because of my back or neck problem), I try to get other people to do things for me.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B21 (Because of my back or neck problem), I lay down and rest more often.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B22 My appetite is not very good (because of my back or neck problem).

- 1 YES
- 5 NO

3 NOT APPLICABLE

B23 (Because of my back or neck problem), I get dressed with help from someone else.

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B24 I sit down most of the day (because of my back or neck problem).

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B25 Have you ever had surgery for your back or neck injury?

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B28 Have you ever been hospitalized for your back or neck injury?

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

B29 Have you had x-rays or an MRI taken because of your back or neck injury?

- 1 YES
- 5 NO
- 3 NOT APPLICABLE

I am now going to read some sentences that may describe people when they have wrist or hand pain. These statements refer to your symptoms for a typical 24-hour period during the past two weeks. (All questions in this section are from 19).

W-1 How severe, if at all, is the hand or wrist pain that you have at night?

Would you say it is mild pain, moderate pain, severe pain, or very severe pain?

- 1 I DO NOT HAVE HAND OR WRIST PAIN AT NIGHT
- 2 MILD PAIN
- 3 MODERATE PAIN
- 4 SEVERE PAIN
- 5 VERY SEVERE PAIN

W2 How often did hand or wrist pain wake you during a typical night in the past two weeks?

- 1 NEVER
- 2 ONCE
- 3 2-3 TIMES
- 4 4-5 TIMES
- 5 MORE THAN 5 TIMES

W3 How severe, if at all, is the hand or wrist pain that you have during the day time?

Would you say it is mild pain, moderate pain, severe pain, or very severe pain?

- 1 I DO NOT HAVE HAND OR WRIST PAIN DURING THE DAY
- 2 MILD PAIN
- 3 MODERATE PAIN
- 4 SEVERE PAIN
- 5 VERY SEVERE PAIN

W4 How often do you have hand or wrist pain during the daytime?

- 1 NEVER
- 2 1-2 TIMES DAILY
- 3 3-5 TIMES DAILY
- 4 MORE THAN 5 TIMES DAILY
- 5 CONSTANTLY

W5 How long on average does an episode of pain last during the daytime? Would you say less than 10 minutes, 10 minutes to an hour, more than 1 hour, or constant throughout the day?

- 1 I NEVER GET PAIN DURING THE DAY
- 2 LESS 10 MINUTES
- 3 10-60 MINUTES
- 4 MORE THAN 60 MINUTES
- 5 CONSTANT THROUGHOUT THE DAY

W6 Do you have numbness or loss of sensation in your wrist or hand?

- 1 YES
- 5 NO

W6a How severe is the numbness or loss of sensation in your wrist or hand? (Would you say it is mild, moderate, severe, or very severe?)

- 1 NO NUMBNESS
- 2 MILD NUMBNESS
- 3 MODERATE NUMBNESS
- 4 SEVERE NUMBNESS
- 5 VERY SEVERE NUMBNESS

W7 Do you have weakness in your hand or wrist?

- 1 YES
- 5 NO

W7a How severe is the weakness in your wrist or hand? (Would you say it is mild, moderate, severe, or very severe?)

- 1 NONE
- 2 MILD WEAKNESS
- 3 MODERATE WEAKNESS
- 4 SEVERE WEAKNESS
- 5 VERY SEVERE WEAKNESS

W8 Do you have tingling sensations in your wrist or hand?

- 1 YES
- 5 NO

W8a How severe are the tingling sensations in your wrist or hand? (Would you say it is mild, moderate, severe, or very severe?)

- 1 NONE

- 2 MILD TINGLING
- 3 MODERATE TINGLING
- 4 SEVERE TINGLING
- 5 VERY SEVERE TINGLING

W9 How severe is the numbness or tingling sensations at night?

(Would you say mild, moderate, severe, or very severe?)

- 1 NONE
- 2 MILD
- 3 MODERATE
- 4 SEVERE
- 5 VERY SEVERE

W10 How often did numbness or tingling sensations wake you during a typical night during the past two weeks?

- 1 NEVER
- 2 ONCE
- 3 2-3 TIMES
- 4 4-5 TIMES
- 5 MORE THAN 5 TIMES

W11 Next, I would like to ask you some questions about how difficult or easy it is for you to do certain tasks.

How much difficulty do you have grasping and using small objects such as keys or pens?

Would you say no difficulty, mild difficulty, moderate difficulty, severe difficulty, or very severe difficulty?

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 VERY SEVERE DIFFICULTY

W12 For the next set of questions, once again, please tell me if you have no difficulty, mild difficulty, moderate difficulty or severe difficulty doing that activity or if you cannot do the activity at all due to hand or wrist symptoms.

Writing.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W13 Buttoning of clothes.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W14 Holding a book while reading.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W15 Gripping of a telephone handle.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W16 Opening a jar.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W17 Household chores.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W18 Carrying grocery bags.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W19 Bathing and dressing.

- 1 NO DIFFICULTY
- 2 MILD DIFFICULTY
- 3 MODERATE DIFFICULTY
- 4 SEVERE DIFFICULTY
- 5 CANNOT DO AT ALL

W20 Have you ever had surgery for your wrist or hand injury?

- 1 YES
- 5 NO

W26 Have you had a nerve conduction test because of your wrist or hand injury?

- 1 YES
- 5 NO

I am now going to read some symptoms that people with a shoulder, arm or upper extremity injury may encounter. When answering these questions, please refer to how you felt in the past 7 days. (Questions S-1 through S-13 are from 23).

S-1 Using a scale from 0 to 10, where 0 means no pain and 10 is the worst pain imaginable, please indicate how severe your pain is for each of the following conditions.

At its worst.

0-10 PAIN LEVEL

S2 When lying on the injured side.

0-10 PAIN LEVEL

S3 Reaching for something on a high shelf.

0-10 PAIN LEVEL

S4 Touching the back of your neck.

0-10 PAIN LEVEL

S5 Pushing with the injured arm.

## 0-10 PAIN LEVEL

S6 Next, using a scale from 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help, please tell me much difficulty you have doing each of the following.

Washing your hair

## 0-10 DIFFICULTY LEVEL

S7 Washing your back.

## 0-10 DIFFICULTY LEVEL

S8 Putting on an undershirt or pullover sweater.

## 0-10 DIFFICULTY LEVEL

S9 Putting on a shirt that buttons down the front.

## 0-10 DIFFICULTY LEVEL

S10 Putting on your pants

## 0-10 DIFFICULTY LEVEL

S11 Placing an object on a high shelf.

## 0-10 DIFFICULTY LEVEL

S12 Carrying a heavy object of 10 pounds.

## 0-10 DIFFICULTY LEVEL

S13 Removing something from your back pocket.

## 0-10 DIFFICULTY LEVEL

S14 Have you ever had surgery for your shoulder or arm injury?

1 YES

5 NO

S18 Have you had x-rays or an MRI because of your shoulder or arm injury?

1 YES

5 NO

P1a Now I am going to ask you some questions about the quality of health care you have received for your (injury) injury.

First, I'd like to read you a list of health care providers and have you tell me if you have gone to that health care provider for treatment for your (injury) injury.

Have you gone to see a company physician?

1 YES

5 NO

P1b (Have you gone to see a) primary care physician in an HMO?

- 1 YES
- 5 NO

P1c (Have you gone to see a) family physician?

- 1 YES
- 5 NO

P1d (Have you gone to see a) specialist?

- 1 YES
- 5 NO

P1e (Have you gone to see a) surgeon?

- 1 YES
- 5 NO

P1g (Have you gone to see a) chiropractor?

- 1 YES
- 5 NO

P1h (Have you gone to see a) physical/occupational therapist?

- 1 YES
- 5 NO

P1i (Have you gone to see) any other health care provider?

- 1 YES
- 5 NO

P1ia What type of health care provider did you go see?[allow 2]

P2 Of the health care providers you mention above, which one would you describe as the primary provider of health care treatment for the injury you reported in (month) (or the time that you were injured).

- 1 COMPANY PHYSICIAN
- 2 FAMILY PHYSICIAN
- 3 PRIMARY CARE PHYSICIAN (HMO)
- 4 SPECIALIST
- 5 SURGEON
- 6 CHIROPRACTOR
- 7 PHYSICAL/OCCUPATIONAL THERAPIST
- 0 OTHER:SPECIFY[specify]

P3 Did this or another health care provider issue restrictions on the activities you can do at work?

- 1 YES
- 5 NO

Next, I would like to ask you some additional questions about the quality of health care you have received for your

(injury).

P4 How often have your health care providers been insensitive to your preferences for treatment? Would you say never, rarely, sometimes, often, or always? (1)

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

P5 (How often have your health care providers) Made decisions without your best interests in mind? (1)

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

P6 (How often have your health care providers) Not given you a thorough explanation of your health status? (1)

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

P7 Next, using a scale from 1 to 5, where 1 is not knowledgeable at all and 5 is very knowledgeable,

How knowledgeable is your health care provider about your injury?

- 1 NOT AT ALL KNOWLEDGEABLE
- 2
- 4
- 5 VERY KNOWLEDGEABLE

P8 (Using a scale from 1 to 5, where 1 is not knowledgeable at all and 5 is very knowledgeable)

How knowledgeable is your health care provider about the physical requirements of your job?

- 1 NOT AT ALL KNOWLEDGEABLE
- 2
- 4
- 5 VERY KNOWLEDGEABLE

I1 Now we would like to ask you some questions about your health insurance coverage and your medical expenses.

Did you have health insurance coverage in (month)?

- 1 YES
- 5 NO

I2a Was that private medical insurance provided through an employer or union?

- 1 YES
- 5 NO

I2b Was that private medical insurance an individually purchased private insurance plan?

- 1 YES
- 5 NO

I4 If you lost your job, would you still have health care coverage through your spouse or some other household member, through another source, or not at all?

- 1 THROUGH SPOUSE OR OTHER HOUSEHOLD MEMBER
- 2 ANOTHER SOURCE: SPECIFY [specify]
- 3 NONE, NOT AT ALL

I5 How much is the yearly deductible on your insurance plan, that is, the amount of your medical costs you have to pay each year before your insurance company begins to pay?

0-10000 DEDUCTIBLE AMOUNT

I6 What percentage of your health care costs do you have to pay after meeting the deductible?

0-100 PERCENTAGE

I7 Does your current insurance coverage require you to choose a primary care physician? (1)

- 1 YES
- 5 NO

Does your primary care physician or insurer have to approve any contacts with specialty physicians before the insurance will cover care from a specialist? (1)

- 1 YES
- 5 NO

I9 Have you or other family members spent money on bills for visits to the doctor, medical tests, physical therapy, prescription drugs, hospital stays or hospital-related services for treatment related to your (injury) injury? (Adapted from 2)

- 1 YES
- 5 NO

I10a What was the main reasons for the out-of-pocket expenses?[allow 2] (Adaptation of 2)

- 1 DEDUCTIBLES THAT ARE A PART OF INSURANCE
- 2 EXPENSES EXCEEDED MAXIMUM AMOUNT OF INSURANCE
- 3 COMPANY STATED INJURY WAS NOT COVERED
- 4 REFERRAL TO A SPECIALIST
- 5 MEDICATION NOT COVERED

I11 How much in out-of-pocket expenses was spent?

0-999996 AMOUNT OF OUT POCKET EXPENSES]

I11a Was it more than \$800, more than \$600, more than \$400 or more than \$200?

- 1 MORE THAN \$800?
- 2 MORE THAN \$600?

- 3 MORE THAN \$400?
- 4 MORE THAN \$200?

Now we would like to ask you about the quality of work life at the place of business where you were employed in (month).

For each of the following aspects of the job you held at the time you became injured, please tell me if you were very dissatisfied, somewhat dissatisfied, somewhat satisfied or very satisfied with that aspect of the job you held during (month).

IR1a The first is, pay and benefits. (7)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 4 SOMEWHAT SATISFIED
- 5 VERY SATISFIED

IR1b Job Security. (7)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 4 SOMEWHAT SATISFIED
- 5 VERY SATISFIED

IR1c Decision-making authority. (7)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 4 SOMEWHAT SATISFIED
- 5 VERY SATISFIED

IR1d Use of your talents and abilities. (7)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 4 SOMEWHAT SATISFIED
- 5 VERY SATISFIED

IR1f Your relationships and contacts with co-workers. (7)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 4 SOMEWHAT SATISFIED
- 5 VERY SATISFIED

IR1e Your job as a whole. (7)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 4 SOMEWHAT SATISFIED
- 5 VERY SATISFIED

IR Are you currently employed by the same employer you had in (month), (or the time that you were injured)?

- 1 YES

5 NO

Please tell me to what extent you disagree or agree with each of the following statements.

IR2 Job decisions at my workplace are made in an unbiased manner. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR3 My manager makes sure that all employee concerns are heard before job decisions are made. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR4 To make job decisions, my manager collects accurate and complete information. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR5 My general manager clarifies decisions and provides additional information when requested by employees. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR6 All job decisions are applied consistently across all affected employees. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR7 Employees feel free to challenge or appeal job decisions made by their managers. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR8 When decisions are made about my job, my manager treats me with kindness and consideration. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR9 When decisions are made about my job, my manager treats me with respect and dignity. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE

- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

'R11 When decisions are made about my job, my manager deals with me in a truthful manner. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR12 When decisions are made about my job, my manager is sensitive to my personal needs. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR13 When decisions are made that affect my job, my manager shows concern for my rights as an employee. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR14 My manager very clearly explains any decisions about my job. (8)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

Next, I would like to ask you some questions about job rewards.

When you think about the rewards you receive at work, please tell me how fair or unfair your employer has been in rewarding you for each of the following.

IR15 The amount of effort you put into your job. Would you say your rewards are very fair, somewhat fair, somewhat unfair, or very unfair?

- 1 VERY FAIR
- 2 SOMEWHAT FAIR
- 4 SOMEWHAT UNFAIR
- 5 VERY UNFAIR

IR17 Your job responsibilities.

- 1 VERY FAIR
- 2 SOMEWHAT FAIR
- 4 SOMEWHAT UNFAIR
- 5 VERY UNFAIR

IR18 Your work experience.

- 1 VERY FAIR
- 2 SOMEWHAT FAIR
- 4 SOMEWHAT UNFAIR
- 5 VERY UNFAIR

IR19 The stress level in your job.

- 1 VERY FAIR
- 2 SOMEWHAT FAIR
- 4 SOMEWHAT UNFAIR
- 5 VERY UNFAIR

IR20 Your performance on the job.

- 1 VERY FAIR
- 2 SOMEWHAT FAIR
- 4 SOMEWHAT UNFAIR
- 5 VERY UNFAIR

IR21 Since you visited a health care provider in (month) (or the time that you were injured) using a scale from 1 to 5, where 1 is very unsupportive and 5 is very supportive, how unsupportive or supportive has your supervisor been? (5)

- 1 VERY UNSUPPORTIVE
- 2
- 4
- 5 VERY SUPPORTIVE

IR22 (Since the injury in (month) (or the time that you were injured) using a scale from 1 to 5, where 1 is very unsupportive and 5 is very supportive) (5)

How unsupportive or supportive have your co-workers been?

- 1 VERY UNSUPPORTIVE
- 2
- 4
- 5 VERY SUPPORTIVE

IR23 Please tell me to what extent you disagree or agree with the following two statements. (5)

If I am sick or injured, my employer will not want me anymore since there are lots of people out there ready to take my job.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR24 When employees become injured, co-workers are afraid to talk to them for fear of being labeled a trouble maker.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

IR25 Next, using a scale from 1 to 5, where 1 is discourage strongly and 5 is encourage strongly, how would you rate your company's policy in reporting work place injuries at the time you became injured? (5)

- 1 DISCOURAGED STRONGLY
- 2
- 4
- 5 ENCOURAGED STRONGLY

IR26 Using a scale from 1 to 5, (where 1 is discourage strongly and 5 is encourage strongly), how would you rate your supervisor's attitude in reporting work place injuries at the time you became injured? (5)

- 1 DISCOURAGED STRONGLY
- 2
- 4
- 5 ENCOURAGED STRONGLY

The next set of questions are about the physical work environment. For each activity that I read, please tell me if you were never, rarely, sometimes, often, or always required to do that activity for the job you held in (month) (or the time that you were injured). (Questions M1 through M9 are from 10)

M1 Have to lift, including pushing and pulling efforts, between 1 and 25 lbs?

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

M2 Have to lift, including pushing and pulling efforts, over 25 lbs?

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

M3 Make the same finger movements several times per minute?

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

M4 Reach at or above shoulder level?

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

M5 Sit?

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

M6 Walk?

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN

**5 ALWAYS****M7 Stand?**

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

**M8 Bend?**

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

**M9 Use vibrating hand tools?**

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

**M10 How often can you regulate the pace of work? (24/25)**

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

**M11 How often can you control the choice of tasks you do in your job? (24/25)**

- 1 NEVER
- 2 RARELY
- 3 SOMETIMES
- 4 OFTEN
- 5 ALWAYS

**M12 What degree of physical activity is usually required in your job? Would you say very light, light, medium, heavy, or very heavy? (10a)**

- 1 VERY LIGHT
- 2 LIGHT
- 3 MEDIUM
- 4 HEAVY
- 5 VERY HEAVY

**M13 What is your perception of the degree of physical exertion in your job? (10a)**

Would you say very light, light, medium, heavy, or very heavy?

- 1 VERY LIGHT
- 2 LIGHT

- 3 MEDIUM
- 4 HEAVY
- 5 VERY HEAVY

M14 Using a 5 point scale, where 1 means no control and 5 means complete control, how much control do you have over the work methods you use to do your job? (24/25)

- 1 NO CONTROL
- 2
- 4
- 5 COMPLETE CONTROL

Next, I would like to ask you some specific questions about the job you held at the time you were injured in (month) (or the time that you were injured).

J1 How many hours did you usually work per week at that job? (6)

- 0-39
- 40-60 HOURS    65    HOURS VARIED

J2 Were you employed full-time, part-time, or something else? (5)

- 1 FULL-TIME
- 2 PART-TIME
- 3 SOMETHING ELSE[specify]

3 Were you employed on a temporary basis, on a permanent basis, or something else?

- 1 TEMPORARY BASIS
- 2 PERMANENT BASIS
- 3 SOMETHING ELSE[specify]

J4 What is the name and location of the business where you were employed in (month) (or the time that you were injured).

J5 As of (month) how long had you been with your employer? (5)

- 0 LESS THAN ONE YEAR
- 1-50 YEARS

J5a (How many months had you been at your job when you were injured).

- 1-11 MONTHS

J6 What kind of work did you do for that employer, that is, what is/was your occupation? [allow 4] (6)

'a For this job (the job you held at the time of your injury) do you/did you work for an hourly wage, an annual salary, commission, or something else? (6)

- 1 HOURLY WAGE
- 2 ANNUAL SALARY

3 COMMISSION

4 SOMETHING ELSE: SPECIFY[specify]

J7b What is/was your hourly rate of pay in dollars and cents? (6)

1-30 DOLLARS

J7ba [no erase](What is/was your hourly rate of pay in dollars and cents)?

00-99 CENTS

J7d Including overtime pay, tips, and commissions, what are/were your usual yearly earnings on this job before tax or other deductions? (6)

0-999997 DOLLARS

J7dd What is your best estimate of your usual earnings on this job before taxes or other deductions? (6)

0-999997 DOLLARS

Jdd7 [no erase]Is this amount weekly, biweekly or twice monthly, monthly, or annually? (6)

1 HOURLY

2 WEEKLY

3 BIWEEKLY OR TWICE MONTHLY

4 MONTHLY

5 ANNUALLY

J8 At this/that job, are/were you a member of a labor union? (6)

1 YES

5 NO

J9 Were you unable to work for one or more days as a result of your injury?

1 YES

5 NO

J10a How many days were you unable to work as a result of your injury?

1-365 DAYS

J10b Did these occur in a single spell or did you experience several spells of absences?

1 SINGLE SPELL

5 SEVERAL SPELLS OF ABSENCE

J10c Were you off for a full week at any one time?

1 YES

5 NO

J11 Who determined when you returned to work? (11)

- 1 EMPLOYER
- 2 EMPLOYEE (RESPONDENT)
- 3 PHYSICIAN
- 4 OTHER (PLEASE SPECIFY) [specify]

J12 Did your employer make any changes to get you back to work, such as providing transportation, changing your work hours, changing your job requirements, assigning you do a different job, or allowing you to work at home? (11)

- 1 YES
- 5 NO

J13 What type of assistance did you receive? (11)

- 1 TRANSPORTATION
- 2 DIFFERENT WORK HOURS
- 3 CHANGE IN JOB REQUIREMENTS
- 4 ASSIGNED TO A DIFFERENT JOB
- 5 WORKING AT HOME
- 6 OTHER (PLEASE SPECIFY)[specify]

J15 Earlier, you told me that you were no longer employed at the same job you were in (month). Could you tell me why?

- 1 MY INJURY PREVENTS ME FROM DOING MY JOB.
- 2 JOB NO LONGER EXISTS FOR REASONS UNRELATED TO MY INJURY
- 3 RETIRED FROM THAT JOB
- 4 WANTED A JOB WITH MORE FLEXIBILITY BECAUSE OF MY INJURY
- 5 FOUND A JOB I PREFERRED TO MY PREVIOUS JOB FOR REASONS UNRELATED TO MY INJURY
- 6 HAD RESTRICTIONS THAT MY EMPLOYER WOULD NOT HONOR.
- 7 OTHER (PLEASE SPECIFY)[specify]

J16 Have the number of hours you work been changed since (month)? (6)

- 1 YES
- 5 NO

J17 Now how many hours is your usual work week? (6)

- 0-39 HOURS
- 40-60 HOURS
- 65 HOURS VARY

J18 Is your rate of pay higher, lower, or the same as it was in (month) (or the time that you were injured)? (6)

- 1 HIGHER
- 3 THE SAME
- 5 LOWER

J19a Are you now working for an hourly wage, an annual salary, commission, or something else? (6)

- 1 HOURLY WAGE]
- 2 ANNUAL SALARY]
- 3 COMMISSION]
- 4 SOMETHING ELSE: SPECIFY[specify]

J19b What is your hourly rate of pay in dollars and cents now? (6)

1-30 DOLLARS

J19d Including overtime pay, tips, and commissions, what are your usual yearly earnings now on this job before tax or other deductions? (6)

0-999997 DOLLARS

J20 What is your best estimate of your usual earnings now on this job before taxes or other deductions? (6)

0-999997 DOLLARS

J20a [no erase]Is this amount weekly, biweekly or twice monthly, monthly, or annually? (6)

- 1 HOURLY
- 2 WEEKLY
- 3 BIWEEKLY OR TWICE MONTHLY
- 4 MONTHLY
- 5 ANNUALLY

C1 Have you filed a workers compensation claim as a result of the (injury) that you saw a physician for in (month)?

- 1 YES
- 5 NO

2a On what date did you file this claim?

C3a Which of the following types of benefits have you received from this workers compensation claim.

Have you received wage replacement?

- 1 YES
- 5 NO

C3b Are your medical bills being paid?

- 1 YES
- 5 NO

C3c Are you receiving rehabilitation services?

- 1 YES
- 5 NO

C3d Are you receiving any other benefits?

- 1 YES: SPECIFY BENEFITS[specify]
- 0 NO

C4 Have there been any disputes or disagreements with your employer or the insurance company over your claim?

- 1 YES
- 5 NO

C5a Which of the following issues were the source of the dispute.

Whether or not your injury is work-related?

- 1 YES
- 5 NO

C5b Whether or not you can do your usual job?

- 1 YES
- 5 NO

C5c Whether or not your medical treatment is appropriate?

- 1 YES
- 5 NO

C5d Whether or not you are able to work?

- 1 YES
- 5 NO

C5e Whether or not the employer will honor physical restrictions ordered by your physician?

- 1 YES
- 5 NO

C5f Were there any other issues?

- 1 YES
- 5 NO

C5fa What other issues were the source of dispute?[allow 2]

[specify]

C6 Using a scale from 1 to 5, where 1 is very much in dispute and 5 is fully resolved, how successfully have these disputes been resolved?

- 1 VERY MUCH IN DISPUTE
- 2
- 4
- 5 FULLY RESOLVED

C7 To what extent do you disagree or agree with the following statements.

Because I filed a workers' compensation claim, I was discriminated against or harassed.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

.8 Because I filed a workers compensation claim, I am concerned I might lose my job.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE

- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

79 Because I filed a workers' compensation claim, I am concerned about losing future promotions and other job opportunities with my employer.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE

- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

C10 We are interested in the factors that entered into your decision not to file a workers compensation claim. The following are reasons people often give for not filing a claim. For each reason, please tell me it entered into your decision not to file a claim.

The injury was not serious enough.

- 1 YES
- 5 NO

C11 You did not expect to miss work because of injury.

- 1 YES
- 5 NO

C12 You did expect to miss some work but knew you would receive sick-leave or short-term disability pay from your employer.

- 1 YES
- 5 NO

C13 Your medical expenses were covered by other insurance.

- 1 YES
- 5 NO

C14 You did not think injury was work related.

- 1 YES
- 5 NO

C15 For each of the following statements, please tell me to what extent you disagree or agree with each statement.

I did not file a workers' compensation claim because I was afraid my co-workers would think I was faking or exaggerating my injury.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE

6 I did not file a workers' compensation claim because I was afraid my supervisor would think I was faking or exaggerating my injury.

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE

4 SOMEWHAT AGREE

5 STRONGLY AGREE

C17 I did not file a workers' compensation claim because, I was afraid I would not be promoted or get other opportunities on the job.

1 STRONGLY DISAGREE

2 SOMEWHAT DISAGREE

4 SOMEWHAT AGREE

5 STRONGLY AGREE

C18 I did not file a workers' compensation claim because I was afraid I would lose my job.

1 STRONGLY DISAGREE

2 SOMEWHAT DISAGREE

4 SOMEWHAT AGREE

5 STRONGLY AGREE

C19 I did not file a workers' compensation claim because I was afraid health care providers would not want to treat workers' compensation cases.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree)?

1 STRONGLY DISAGREE

2 SOMEWHAT DISAGREE

4 SOMEWHAT AGREE

5 STRONGLY AGREE

C20 Have you ever filed a workers compensation claim for any injury other than the injury to your (injury) that you saw a physician for in (month)(or the time that you were injured)?

1 YES

5 NO

C21 How satisfied or dissatisfied are you with your overall experiences with that claim? Would you say you are very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied?

1 VERY SATISFIED

2 SOMEWHAT SATISFIED

4 SOMEWHAT DISSATISFIED

5 VERY DISSATISFIED

Now I'd like to know if you were paid wages or received benefits for the days you lost from work.

Y1 After your injury or illness, did you continue on the payroll, receive lost-wage benefits, or receive neither lost-wage benefits nor pay? (11)

1 CONTINUED ON THE PAYROLL

2 RECEIVED LOST-WAGE BENEFITS

3 RECEIVED NEITHER LOST-WAGE BENEFITS NOR PAY]

2 From what source do you receive disability income? (11)

1 COMPANY OR UNION DISABILITY

2 FEDERAL GOVERNMENT DISABILITY

3 U.S. MILITARY DISABILITY

- 4 STATE OR LOCAL GOVERNMENT DISABILITY
- 5 U.S. RAILROAD RETIREMENT DISABILITY
- 6 PRIVATE ACCIDENT OR DISABILITY INSURANCE
- 7 WORKERS' COMPENSATION
- 8 SSDI OR SSI
- 9 OTHER, SPECIFY [specify]

Y4 Approximately what percentage of your regular wages did you receive on average over the period you were away from work? (11)

0-100 PERCENTAGE

Y5 Did these benefits or pay extend for the entire period that you were unable to work? (11)

- 1 YES
- 5 NO

Y6 Did you use sick leave or vacation days for any of the time you missed from work? (11)

- 1 YES
- 5 NO

Y7 Was this the only way you could miss work and still be paid? (11)

- 1 YES
- 5 NO

INC1 Finally, I have a few demograhpic questions to ask you.

To get a picture of people's financial situations, we'd like to know the general range of incomes of all households we interview. This is for statistical analysis purposes and your answers will be kept strictly confidential.

Y9 Since your injury reported in (month) have you or your family members incurred any new debt as a result of the injury? (2)

- 1 YES
- 5 NO

Y9a How much was borrowed? (2)

0-99999 DOLLARS BORROWED

Y9b Was it more than \$800, more than \$600, more than \$400, or more than \$200? (2)

- 1 MORE THAN \$800
- 2 MORE THAN \$600
- 3 MORE THAN \$400
- 4 MORE THAN \$200

Y10 Since your injury reported in (month) have you or your family members had to use personal savings as a result of the injury? (2)

- 1 YES
- 5 NO

Y10a How much did you use? (2)

0-99999 DOLLARS BORROWED

Y10b Was it more than \$800, more than \$600, more than \$400, or more than \$200? (2)

- 1 MORE THAN \$800
- 2 MORE THAN \$600
- 3 MORE THAN \$400
- 4 MORE THAN \$200

Y11 Which of the following statements best describes the financial impact on you and your family of paying your care?

IWER: PLEASE READ THE CATEGORIES BELOW

- 1 I/we have had to cut back sharply on expenses and still can't make ends meet.
- 2 I/we have had to cut back sharply on expenses but have been able to make ends meet.
- 3 I/we have had to do without some things but are getting by.
- 4 I/we have been able to pick up any extra expenses fairly easily.
- 5 So far there has been no impact.

D1a What is your date of birth?

D2 What is the highest level of school you completed or the highest degree you have received?

- 1 HAD NOT GRADUATED FROM HIGH SCHOOL
- 2 HIGH SCHOOL GRADUATE/GED
- 3 SOME COLLEGE OR POST-HIGH SCHOOL TRAINING
- 4 AA DEGREE
- 5 BA/BS DEGREE
- 6 SOME GRADUATE SCHOOL
- 7 GRADUATE DEGREE

D3 On the date you reported your injury, what was your marital status? Was it married, widowed, divorced, separated, or single never married?

- 1 MARRIED
- 2 WIDOWED
- 3 DIVORCED
- 4 SEPARATED
- 5 SINGLE, NEVER MARRIED
- 7 OTHER: SPECIFY[specify]

D4 How many children live with you?

- 0 NO CHILDREN 1-10 CHILDREN

D5 How many children are under the age of 13?

- 0-10 CHILDREN UNDER 13

D6 How many of the children are 18 years of age or over?

- 0-10 CHILDREN OVER 18

D7 Using a scale from 1 to 5, where 1 is very disruptive and 5 is not disruptive at all, to what extent has the injury you reported in (or about then) disrupted your family life?

- 1 VERY DISRUPTIVE
- 2
- 4
- 5 NOT DISRUPTIVE AT ALL

D8 Using a scale from 1 to 5, where 1 is not understanding at all and 5 is very understanding, how understanding has your family been about any limitations due to your injury?

- 1 NOT UNDERSTANDING AT ALL
- 2
- 4
- 5 VERY UNDERSTANDING

D9 What is your race? Would you say white (or caucasian), black or African American, Native American, or Asian or Pacific Islander.

- 1 CAUCASIAN/WHITE
- 2 AFRICAN AMERICAN/BLACK
- 3 AMERICAN INDIAN
- 4 ASIAN OR PACIFIC ISLANDER
- 5 OTHER (PLEASE SPECIFY)[specify]

D10 Are you of hispanic origin or descent?

- 1 YES
- 5 NO

D11 RECORD GENDER, ASK ONLY IF IN DOUBT

1 MALE  
2 FEMALE

bc1 We would like to recontact you in one to two years to see how you are doing. In case you relocate, is there someone we could contact who would know how to reach you?

1 YES  
5 NO

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## **Appendix II**

# What Percentage of Workers With Work-Related Illnesses Receive Workers' Compensation Benefits?

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*This study estimates the rate at which workers suffering from occupational illnesses file for workers' compensation lost wage benefits and identifies some of the factors that affect the probability that a worker with an occupational illness will file. A database of reports of known or suspected cases of occupational illness is matched with workers' compensation claims data. Overall, between 9% and 45% of reported workers file for benefits. Data limitations prevent a more precise estimate of this rate, but a large proportion of workers with occupational illnesses clearly does not utilize the worker's compensation system. Logit analysis of a choice-based sample shows that women and employees of small firms are more likely than others to file for workers' compensation and that filing rates vary considerably across industries and diagnostic categories. Acute conditions related to the current job are no more likely to lead to claims than chronic conditions with long latency periods between exposure and development of disease.*

Workers' compensation laws were adopted on a state-by-state basis beginning in 1911, with employers being made liable for work-related injuries to employees regardless of fault. The intention was to provide quicker and more certain coverage of the monetary losses suffered by workers with job-related injuries, including medical costs and lost wages. To counterbalance the shift of liability to employers and the increased ease of obtaining compensation, the laws stipulated levels of compensation below what it was possible to obtain in the previous tort-based system. Over the years, the laws have been amended to cover occupational illnesses as well as job-related injuries.

In recent years, there has been concern about the rising premiums paid by employers for workers' compensation insurance and possible overuse of the system by workers. It is widely assumed in the business community and by many policy makers that there are a great many people who apply for workers' compensation benefits and do not deserve them but very few who are entitled to benefits but do not apply.<sup>1</sup> For example, *The New York Times* (December 29, 1991, p 1) quoted the chief executive of a large insurance company as saying that the system gave benefits to "anyone who asks" and described incidents of healthy workers being offered aid in getting workers' compensation benefits they did not need. Many economists have argued that the existence of easily

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obtainable workers' compensation benefits will not only induce workers to apply for them but will make workers more likely to miss work as a result of an injury, stay off work longer, exaggerate the severity of injuries, and even to act in ways that increase the risk of suffering an occupational illness or injury. Several studies have shown a positive relationship between the generosity of workers' compensation benefits in a state and both the number of reported workplace injuries and the amount of time lost due to injury.<sup>2-4</sup>

On the other hand, the public health community and many occupational medicine specialists are concerned with the possible underutilization of the workers' compensation system. There is substantial evidence that of all workers who develop chronic occupational illnesses with long latencies from the time of first exposure to the development of disease such as cancer or pneumoconiosis, only a small percentage actually apply for workers' compensation.<sup>5-9</sup> It has generally been assumed that workers with acute conditions associated with their current jobs file at much higher rates, but little evidence has been presented in support of this assumption, in part because of the scarcity of data sets that allow the identification of individuals eligible for workers' compensation benefits who have not filed for benefits. Studies that have examined acute conditions have actually found that many workers with possibly work-related musculoskeletal conditions do not file.<sup>10-12</sup> For example, a study of employees of a Canadian aircraft engine factory reported that only 10% of workers who reported low back pain to an in-house occupational health facility reported lost work time to the worker's compensation bureau.<sup>11,12</sup>

This study reports the results of analyzing whether approximately 30,000 workers in Michigan, all of whom were reported to the Michigan Department of Public Health as having known or suspected work-related

illnesses, filed for workers' compensation. The analysis is able to place upper and lower bounds on the percentage of workers with occupational diseases who file for workers' compensation. A multivariate analysis of the effect of type of injury and several worker and firm characteristics on the decision of a person with a work-related illness to file for workers' compensation benefits is also reported.

### Data and Matching

In the state of Michigan, employers, hospitals, clinics, and physicians are required by law to report known or suspected "occupational diseases" to the Michigan Department of Consumer and Industry Affairs (Part 56 of Public Act of 1978; during the period covered by the sample, the reports were sent to the Michigan Department of Public Health). The law defines an occupational disease as "an illness of the human body arising out of and in the course of an individual's employment" including skin diseases, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning, disorders due to physical agents, or disorders associated with repeated trauma.

Although approximately 20,000 reports per year are currently being filed under the law, compliance is far from complete, and 90% of the reports are sent in by physicians working for major manufacturing firms. Because of the widespread noncompliance, a sample of the reports received by the state cannot be considered a random sample of all occupational illnesses occurring in Michigan. It does, however, allow the identification of a set of workers, all of whom, in the judgment of a health professional, have a known or suspected work-related illness. In addition to identifying the worker by Social Security number, each report includes information identifying the type of illness or injury, the date of diagnosis, the worker's sex and age, and the address of the employer. As the reports come in, this information

is reviewed and entered into an Occupational Disease Reports (ODR) database.

Using the ODR data base, we constructed a sample consisting of all individuals for whom a report had been filed in the years 1992, 1993, and 1994. If there were multiple reports on the same individual, the information on each was included. Then, using claims data obtained from the Michigan Bureau of Workers' Disability Compensation (BWDC), we attempted to determine which of the individuals in the ODR data had filed claims for workers' compensation wage-replacement benefits. BWDC claims data included a date of injury and, for 49.8% of the claims, a coding for type of injury or illness as well. Claims requesting only reimbursement of medical expenses were, unfortunately, not included in the BWDC data set. However, statistics suggest that payments of claims for medical benefits only are a relatively unimportant part of the total workers' compensation picture, representing less than 10% of total workers' compensation payments annually.<sup>13</sup>

If the BWDC data included a claim with the same Social Security number as that of an individual contained in the ODR data, the individual was said to have a "match." We searched the entire BWDC database, which recorded claims dating as far back as 1966. The older claims were included because if a condition for which a worker files a claim is a recurrence of a condition for which he or she earlier filed a claim, the second claim may be given the date of injury from the first claim filed as a result of that condition. If a Social Security number appearing in the ODR sample did not appear in the BWDC data, we could be sure that there was no match: the individual had filed no wage replacement claim for any of the conditions reported in the ODR data. If a Social Security number did appear in both data sets, but disease codes did not match or there was no disease code in the

BWDC data set, the situation was less clear. It was possible, for example, for an individual to have one condition reported in the ODR data but to have filed a claim for lost wages based on some other condition. Determining whether or not this was actually the case was made difficult by the fact that many of the claims in the BWDC data had incomplete data on the condition giving rise to the claim and by the uncertainty surrounding the claim dates in the BWDC data. Also, the BWDC and the ODR data use different systems for coding medical conditions, and the diagnosing physician filing a report may have coded only one condition when several were present.

In the face of this ambiguity, a person in the ODR data as was classified as possibly having a match if the individual's Social Security number appeared in the BWDC database. A person was classified as almost certainly having a match if their Social Security number appeared in both databases and they had at least one record in the BWDC data with an injury date within seven days of a diagnosis date reported for them in the ODR data; *or* if they had a BWDC report and an ODR report with diagnosis codes describing similar conditions and dates within one month of one another. Because "almost certain" matches are also classified as "possible" matches, the percentage of ODR sample members with possible matches and the percentage of ODR sample members with almost certain matches can be regarded as upper and lower bounds on the true probability that a person for whom an occupational disease report is filed with the state of Michigan will also file a lost workday claim for a reported condition.

### Data Analysis and Results

Table 1 shows summary characteristics for the ODR data. The sample contains 29,558 individuals; approximately 42,000 reports were filed on these individuals (multiple reports

**TABLE 1**  
Characteristics of Occupational  
Disease Reports (ODR) Data

Number of Individuals with Reports	29558
Percent Male	73%
Percent in Firms with >500 Employees	98%
Average Age	43.24

were filed for about 25% of the sample members). Seventy-three percent of the sample was male. Ages ranged from 17 to 70, with a mean of 43.2. All but 2% of the sample members worked for firms with more than 500 employees, reflecting the fact that physicians working for large manufacturing firms are most likely to be in compliance with the reporting law. Seventy percent of the people for whom reports were filed worked in the automobile industry.

Table 2 reports the percentage of people in the ODR sample with no match, a possible match, and an almost certain match in the BWDC data, both for the sample as a whole and for various subsamples. The first line of the table pertains to the sample as a whole and shows one of the central results of the article: at least 55% of the ODR sample members, workers reported by health professionals to have a known or suspected occupational illness, did not file with BWDC for wage replacement benefits. The other 45% may have filed for benefits; we can only be certain that 9% did. Females were more likely than males to be classified as possible matches and also as almost certain matches. No clear generalization concerning age and the propensity to file can be made based on Table 2. The last three lines of the table refer to subsamples of individuals reported for particular medical conditions. Sixty-two and a half percent of workers diagnosed with carpal tunnel syndrome were possible matches; 22.6% were certain matches. The corresponding percentages for those reported for work-

related sprains and strains were lower, at 46.9% and 11.6%. Of workers diagnosed with the long-latency occupational illnesses pneumoconiosis and asbestosis, 56.5% were classified as possible matches. The low percentage of pneumoconiosis/asbestosis cases classified as certain matches (.7%) may be due to the chronic nature of the conditions—more recent recurrences of the problem are more likely to be filed under the dates of the first claim in the BWDC data, and BWDC claims with less recent dates are more likely to be missing data on type of injury.

Comparisons such as these are of limited reliability for at least two reasons: first, because of the existence of the possible but not certain matches, and second because of the possibility that differences between groups in propensity to file are due to some factor other than membership in the group. For example, women may file at the same rate as men who have the same conditions, but may tend to be reported for more serious conditions, leading to an overall higher rate of filing among women. For that reason we conducted a multivariate logit analysis of the decision to file, with the unit of analysis being the individual worker.

Prior to conducting the logit analysis, the possible but not certain matches were excluded from the data set, allowing a comparison of the characteristics of reported workers who almost certainly did file for benefits to those of reported workers who certainly did not. This created a choice-based sample; that is, one chosen in a way that leads the proportion experiencing a certain outcome in a sample to differ substantially from the proportion experiencing that outcome in the population. In order to obtain consistent estimates of the parameters of a logit model explaining the outcome in a choice-based sample, it is necessary to weight the observations prior to estimation. Ideally, the weights are based on the true propor-

TABLE 2

Percentage of Workers Reported for Known or Suspected Occupational Illnesses Who Filed for Wage-Replacement Benefits

	Number	Possible Match: Wage-Replacement Claim Filed, Perhaps for a Reported Condition* (%)	Almost Certain Match: Wage-Replacement Claim Filed with Date and Type Similar to Reported Illness (%)
Full Sample	29558	45.6	9.6
Females	7985	51.6	13.7
Males	21543	35.4	8.0
Age ≤30	2818	38.1	10.1
Age Between 30 and 50	20096	46.9	10.3
Age >50	6644	44.8	7.2
Sprain or Strain	9215	46.9	11.62
Carpal Tunnel	1481	62.5	22.62
Pneumoconiosis or Asbestosis	818	56.5	0.7

\* Includes almost certain matches.

tion of the population experiencing the outcome.<sup>14</sup>

The true proportion of the population of reported workers that filed for benefits is unknown, but we can place precisely estimated bounds on that proportion: as reported in Table 2, between 9.6% and 45.6% of workers reported to have occupational injuries or illnesses filed for wage-replacement benefits. It was found that experimenting with weights consistent with various points within this range had little effect on the logit parameter estimates. We thus report unweighted estimates, which correspond to a situation in which the true proportion of ODR sample members filing for benefits is 15%.

The explanatory variables included in the model are the workers' sex, age and age squared, an indicator variable for whether the workers' firm employed fewer than 500 people, categorical variables for the type of medical condition reported in the ODR, and categorical variables for the industry in which the worker was employed. These latter variables control for the possibility that workers in some industries may experience more severe work-related medical conditions than others, even after holding constant the diagnosis, as well as controlling for any other

differences across industry in the factors affecting a sick worker's decision to file for benefits.

The results of the unweighted logit model are reported in Table 3. All of the control variables except for age and age squared are categorical variables, and the coefficients represent changes in the odds ratio of filing given membership in the associated category rather than the excluded category. The excluded diagnosis category is mental disorders, unspecified symptoms, and assorted infrequently reported conditions; the excluded industry category is motor vehicle parts and accessories.

The estimated odds ratios associated with worker characteristics and firm size are all statistically significant. The coefficient for female (odds ratio [OR] = 1.50; 95% confidence interval [CI], 1.37–1.64) indicates for a female with a known or suspected occupational illness an odds ratio of filing a lost wages claim that is 50% higher than that of a male. The estimate is very precise and, given the rate of filing in the sample, implies a difference in the neighborhood of 5 percentage points. The coefficient for age is positive and that for age squared is negative, indicating that the likelihood of filing a claim increases with age until

age 46, then begins to decline, but overall the effect of age is small. In addition, the results suggest that the likelihood of filing a claim is higher for employees of firms with fewer than 500 workers (OR = 1.66; 95% CI, 1.25–2.19).

The diagnostic categories and the industry categories both explain a significant amount of the variation in the likelihood of a match. When the diagnostic category variables are added to a model that includes only worker characteristics and firm size, the log-likelihood ratio increases from -7606.88 to -6948.75; adding the industry category variables increases it to -6685.14.

## Discussion

Previous studies that focused on particular occupational diseases or the employees of a single firm have reported low rates of filing for workers' compensation among sick workers.<sup>5–12</sup> Our results confirm these findings using a sample of employees of a variety of firms who suffered from a wide range of occupational illnesses. Although our sample is broader than those used in previous studies, it is still limited almost entirely to the employees of large manufacturing firms. Unionization rates are higher in large manufacturing firms than in the economy as a whole, and higher in Michigan than for the nation as a whole. Thus it is likely that the level of unionization is much higher among workers in our sample than it would be for a random sample of workers. A recent study indicates that workers' compensation reciprocity rates are significantly higher in unionized versus nonunionized workplaces.<sup>15</sup> This suggests that had our sample been more representative of the general population of workers with occupational illnesses, we would have estimated even lower rates of filing for workers' compensation.

Our study is unique in that it explores the determinants of the decision to file for workers' compensation using a sample limited to

**TABLE 3**  
Logit Model Comparing Reported Workers Who Did Not File to Those Who Almost Certainly Did\*

Independent Variable	Coefficient (Odds Ratio)	95% Confidence Interval
Worker and Firm Characteristics		
Female	1.50	1.37-1.64
Fewer than 500 employees at firm	1.66	1.25-2.20
Age	1.10	1.06-1.13
Age squared	1.00	.998-.999
Diagnosis Categories†		
Carpal tunnel	3.09	2.47-3.86
Disorders of or foreign objects on eye	.17	.08-.38
Ear diseases	.03	.02-.06
Pneumoconiosis due to dust or sand	1.33	.94-1.90
Asbestosis	4.06	.13-129.97
Other respiratory problems	.29	.09-.96
Skin problems	.26	.19-.36
Arthropathies; rheumatism not including back	1.25	1.03-1.51
Dorsopathies	1.15	.89-1.49
Sprains and strains of arm	.86	.70-1.06
Sprains and strains of hand or wrist	.89	.73-1.10
Other sprains and strains	1.64	1.27-2.11
Burns; effects of heat, cold, or light	.21	.12-.37
Poisoning; toxic effects of substances	.32	.18-.60
Injuries (fractures, dislocations, contusions, open wounds, etc)	.79	.54-1.14
Industry Categories‡		
Chemicals	.95	.64-1.41
Rubber and plastics	1.30	.97-1.75
Primary metals	.53	.38-.74
Fabricated metal	1.31	1.11-1.56
Machinery, excluding electric	.58	.35-.98
Electric/electronic equipment	.95	.67-1.3
Motor vehicles and other transportation equipment	2.49	2.25-2.75
Other manufacturing	4.91	3.85-6.27
Hospitals and health services	3.13	1.84-5.33
Other non-manufacturing	.46	.21-1.00
Industry not reported	5.4	2.21-13.23

\* Dependent variable equals 1 if claim was filed, zero otherwise; sample mean = .149; Sample Size = 18297.

† The excluded or comparison category includes mental disorders, ill-defined conditions and symptoms, and a collection of infrequently reported conditions.

‡ The excluded or comparison industry is Motor Vehicles Parts and Accessories.

individuals identified by a physician as having a work-related illness. However, there are numerous studies of how workers' compensation reciprocity or absenteeism vary with sex, age, and/or firm size, and they have some bearing on our logit results concerning worker characteristics.<sup>3,16-21</sup> In these studies, the outcome variable is either an individual's decision to file for worker's compensation or to miss work, or the injury or claims rate of an establish-

ment. The variation in the outcome variable reflects both the variation in the probability of becoming sick or injured and in the probability of responding to that event by filing a claim or missing work. Our study, by contrast, attempts to explain variation in the claims rate conditional on having a known or suspected occupational illness.

Previous estimates of the effect of sex on both the likelihood of receiving workers' compensation benefits

and the likelihood of absenteeism from work has generated mixed results, with the direction and significance of the male/female difference varying across studies and even varying within studies depending on the sample or the list of control variables used.<sup>3,16-18</sup> Two of three studies looking at the relationship between absenteeism and age find it to be positive and significant, and the explanation given is that older workers need more time for recuperation.<sup>16,18,20</sup> Studies of injury rates and benefit reciprocity, however, have found these outcomes to decline with age.<sup>3</sup> Only two of the studies include measures of firm size, with one finding that injury rates decline with firm size, and one finding that absenteeism increases with firm size for blue-collar workers.<sup>18,21</sup> One explanation of our result of a smaller propensity to file in larger workplaces may be that workers at large firms are more likely to have access to medical and other income replacement benefits that can serve as an alternative to workers' compensation.<sup>10</sup> However, it is possible that the significant coefficient on firm size in Table 3 results from the fact that although diagnosis category has been controlled for, the severity of a condition within a category is not. Reports on employees of smaller companies are typically received from non-company physicians, who report much less frequently than company physicians. If a non-company physician reports, it may be because the illness is more severe or simply because the physician is seeing the worker for a workers' compensation evaluation.

Coefficients of many of the diagnosis categories were statistically significant. Workers reported for carpal tunnel syndrome were most likely to file (OR = 3.09; CI, 2.47-3.86), followed by sprains and strains excluding the arm and wrist (OR = 1.64; CI, 1.27-2.11). Among the conditions least likely to generate a claim were chemical and heavy metal toxicity (OR = .32; 95% CI,

.18-.60). foreign objects in the eye (OR = .17; 95% CI, .08-.37), burns and other effects of heat (OR = .21; 95% CI, .12-.37), and hearing loss (OR = .03; 95% CI, .02-.05). While previous studies have reported that only a small percentage of workers who develop chronic occupational illnesses with long latency periods from the time of first exposure to the development of disease file for workers' compensation, this study found similarly low percentages of workers filing for acute conditions. Actually, in our sample, after controlling for age, gender, industry, and employer size, workers with pneumoconiosis were more likely to file than those in any other diagnosis categories, although this difference was not statistically significant (OR = 4.06; 95% CI, .12-129.97). Once again, this may be due to the fact that reports of pneumoconiosis are more likely to be received from non-company physicians on patients who are in the process of filing a workers' compensation claim.

Primary metals, machinery manufacturing, and nonmanufacturing industries are those in which a reported illness or injury was least likely to result in a claim for lost wages, other things equal. The industries in which workers were more likely to file are motor vehicles, health services, and miscellaneous manufacturing. Workers for whom no industry was reported are also much more likely to file. There is no obvious explanation of the pattern of propensity to file across industry. Particularly puzzling is the significant difference between the motor vehicles industry and the very similar motor vehicles parts and accessories industry.

As noted above, our major finding is that at least 55% percent of the members of our sample, and perhaps as many as 90%, did not file for wage-loss benefits. Why they did not remains to be explained. One possible reason for a failure to file on the part of a worker in our sample would be that his or her condition was not "compensable" under workers' com-

pensation law. This does not seem likely, given that to be included in our sample a worker must have been diagnosed by a health professional, in most cases one acting on behalf of the workers' employer, as having a known or suspected occupational disease. Furthermore, under workers' compensation, the threshold for compensability is a very broad one. Work-related activities need not be the primary cause or even the "cause" of a compensable disability. It is generally sufficient that work "caused, contributed to, or in some way aggravated" a condition.<sup>22</sup>

The more likely reason for the failure of many of the workers in the ODR database to appear in the BWDC data base is that the latter data contains only claims for lost-wage benefits; claims for reimbursement of medical costs only are not included. In Michigan, one must be out of work for at least one full week to be eligible for lost-wage benefits; many of the workers reported to the Department of Public Health probably did not satisfy this criterion. This finding itself is significant, however. If, as some employers seem to believe, workers have a tendency to overuse workers' compensation benefits, one might expect to see a substantial portion of the people who have been identified by the company doctor as suffering from a work-related condition taking a week away from work. The evidence we have presented suggests that a significant number of employees with occupational diseases forego this option, instead choosing to "tough it out" or "work through" the problem that first brought them to the attention of the company physician. It also seems clear that worker's compensation claims data cannot be relied upon as an indicator of the prevalence of occupational illnesses.

We are currently in the process of interviewing a sample of 1600 workers reported with known or suspected occupational diseases. It is hoped that these interviews will lead to a better understanding of why some

workers with occupational disease file for workers' compensation and others do not.

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### A Girl's Best Friend

Two hundred years ago economist Adam Smith wondered why water, which was essential to life, cost almost nothing, while diamonds—which were essentially useless—commanded extraordinary prices. The short answer today is De Beers. Like an octopus, the 100-year-old South African company has spread its powerful tentacles throughout the diamond industry, using its muscle to set prices. . . . De Beers Consolidated Mines produces about half of the world's diamonds from mines in South Africa, Tanzania, Botswana, and Namibia. It also strikes deals with other companies and countries to market their diamonds through a cartel—the Central Selling Organization. When there are too many diamonds on the market and the artificially inflated price drops, De Beers steps in to buy the oversupply. In 1996, it stockpiled \$6.7 billion worth.

Several times a year, privileged diamantaires—a select group of buyers of rough diamonds—travel to the CSO's offices in London to purchase uncut stones. Each buyer is presented with a plain plastic container holding millions of dollars' worth of diamonds. The buying is called a "sight" and the purchasers are expected to take what they are handed—no haggling allowed. The diamantaires then sell the stones to cutters and polishers, who in turn sell them to jewelers. . . . 85 percent of Canadian women receive a diamond ring when they get engaged—the highest engagement-ring rate in the world.

—Hunter J. Behind All the Glitter. *Maclean's*, 1997/8;110:52, p 89.

# Why Most Workers With Occupational Repetitive Trauma do not File for Workers' Compensation

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*Despite the availability of no fault insurance for wage replacement and medical care costs, the majority of workers diagnosed with an occupational disease do not apply for workers' compensation. The objective of the study was to determine the reasons why workers diagnosed with work-related musculoskeletal disease did not apply for workers' compensation benefits. A cross-sectional study of 1598 individuals diagnosed with neck, upper extremity, and low back work-related musculoskeletal disease from April to June 1996 was performed. All individuals were interviewed over the telephone using a standardized questionnaire. The questionnaire included questions about the precipitating event; demographics; health limitations; mood; pain level; and attitudes toward health care provider, fellow workers, management, work environment, and filing for workers' compensation. Whenever possible, standardized questions from previous surveys were used. The interviewed individuals with work-related musculoskeletal disease were reported by health care practitioners as required by the state of Michigan's occupational disease reporting law. Workers reported during 12 weeks in the spring of 1996 by a Michigan health care professional as having a neck, back, or upper extremity musculoskeletal disorder were eligible to participate. Among the 2703 reports received, 490 individuals could not be reached, 22 did not speak English, 12 had died or were too incapacitated by other medical conditions, and 581 refused. We interviewed 59% of all eligible workers and 73% of all workers who were reachable and capable of responding in English. Only 25% of workers diagnosed with musculoskeletal disease filed a workers' compensation claim. The factors significantly associated with filing a claim were (1) increased length of employment (> 21 years: odds ratio [OR], 3.01, 95% confidence interval [CI], 1.31 to 6.90); 11 to 20 years: OR, 2.34, 95% CI, 1.01 to 5.47; 6 to 10 years: OR, 1.76, 95% CI, 0.73 to 4.25; 1 to 5 years: OR, 2.36, 95% CI, 1.03 to 5.42; < 1 year: OR, 1.00; (2) lower annual income (< \$40,000: OR, 1.75, 95% CI, 1.06 to 2.88 vs  $\geq$  \$80,000: OR, 1.00); (3) workers' dissatisfaction with coworkers (OR, 1.76, 95% CI, 1.01 to 3.06); (4) physician restrictions on activity (OR, 2.16, 95% CI, 1.55 to 3.00); (5) type of physician providing treatment (specialist, including surgeon or orthopedist: OR, 3.63, 95% CI, 2.37 to 5.55); physical and occupational therapist: OR, 2.15, 95% CI, 1.35 to 3.43; family practitioner: OR, 1.33, 95% CI = 0.89 to 2.01; company physician: OR = 1.00); (6) off work  $\geq$  7 days (OR, 14.85, 95% CI, 10.57 to 20.85); (7) decreased current health status (OR, 0.82, 95% CI, 0.70 to 0.96); and (8) increased severity of illness (OR, 1.24, 95% CI, 1.06 to 20.88). This study showed that only 25% of workers with a work-related musculoskeletal condition filed for workers' compensation and refutes the common perception that an individual with a work-related problem is likely to file a workers' compensation claim. The strongest predictors of who would file were those factors associated with the severity of the condition. Other factors were increasing length of employment, lower annual income, and worker dissatisfaction with coworkers. Our study population consisted mainly of unionized autoworkers, and our findings may not be generalizable to the total workforce.*

In a recent study of approximately 30,000 workers in Michigan, we reported that the majority of individuals with known or suspected occupational disease had not filed claims for workers' compensation wage replacement.<sup>1</sup> The study was limited by missing data in the computerized workers' compensation file on date of injury and diagnosis. Only 9.6% of the workers reported to the state by a health care professional as having a known or suspected occupational disease could be matched on both social security number and date of disease or type of disease with a record in the workers' compensation wage-replacement file. The social security number alone of another 36% of the workers who were reported to the state by a health professional as having a known or suspected occupational disease could be matched with a record in the workers' compensation wage-replacement file. Therefore, we determined the lower and upper limits of the percentage of workers who had filed to be 9.6% and 45.6% for all conditions combined, and 11.6% and 62.5% for repetitive trauma.<sup>1</sup> Additionally, because claims requesting medical reimbursement only were not part of the computerized workers' compensation file, we could not determine if there were some workers reported by a health care professional as having a known or suspected occupational disease who had filed for reimbursement of medical expenses but not for wage replacement.<sup>1</sup>

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We report here on a study of 1,598 workers who were not among the 30,000 workers reported in the previous study but who were reported under the same law in a later period by a health care professional as having a known or suspected occupational disease of repetitive trauma. The purposes of this study were to determine what percentage of workers filed for workers' compensation, including wage replacement and/or reimbursement of medical expenses, and to assess why a worker did or did not file for workers' compensation benefits.

## Subjects and Methods

### Setting and Sample

As prescribed by law (Part 56 of Public Act of 1978) the state of Michigan requires employers, clinics, hospitals, and physicians to report all known or suspected occupational diseases, but not injuries. Over 20,000 reports are received each year, with nearly 90% being submitted by health care professionals associated with large employers.<sup>2</sup> Occupational diseases include skin disease, lung disease, poisonings, disorders due to physical agents, and disorders associated with repeated trauma "arising out of and in the course of an individual's employment."

From reports received from April through June 1996 of workers with known or suspected occupational disease, we identified those with neck, back, or upper extremity disorders. Relatively few reports involving back disorders were received (only 7% of reports) because the official interpretation of the disease reporting law is that back disorders are considered injuries and are not required to be reported. All reported workers received a letter 3 to 4 weeks after the report was received explaining the purpose of the proposed study and inviting their participation. For weeks 1 to 3, 8, 9, 11, and 12, all workers with the selected repetitive conditions were contacted.

For weeks 4 to 7 and 10, for which there were a larger number of reports than we could process expeditiously, we selected a random sample of 150 reports per week of the selected conditions. The initial invitation letter sent to prospective participants was followed by a telephone call from a trained interviewer.

### Instruments and Data Collection

A standardized telephone questionnaire was administered by trained interviewers. The questionnaire included questions about the event precipitating the occupational disease report; demographics; health limitations from the repetitive trauma; mood; and symptoms specific to back, shoulder, or wrist. Questions elicited information on the pain level; attitude toward health care provider; and attitudes toward work, including fellow workers, management, work environment, and filing for workers' compensation. When possible, standard questions were used from other questionnaires, including the National Health Interview Survey and the SF-20.<sup>3</sup>

The severity of each type of repetitive trauma was measured on a scale derived from self-reported restrictions to activities of daily living and the extent and limitations of movement or exertion directly attributed to the repetitive trauma. The functional limitations associated with a back problem were derived from a back pain scale created by Roland and Morris<sup>4</sup> that uses 24 items with a dichotomous response. The measure for shoulder trauma is derived from a 13-item shoulder pain and disability index developed by Williams et al.<sup>5</sup> A 19-item scale developed by Levine et al<sup>6</sup> was used to measure the severity of wrist trauma. For each type of repetitive trauma, the overall severity measure is scaled to have a range of 0 to 100. Higher values signify greater impairment. Reliability coefficients ( $\alpha$  coefficients) for these measures are over 0.90.

Measures of general health and function were constructed using

items from the SF-20.<sup>3</sup> The measure of physical functioning is a subscale based on six items that measure physical limitations and capacities, mobility, and ability to care for oneself. A 3-point Likert scale is used for the extent of limitation: limited for >3 months, limited for 3 months or less, and not limited at all. Role functioning is a subscale based on two items that measure limitation in social and work activities. Reliability coefficients for these measures are 0.75 and 0.69, respectively. Respondents rated their general health on a 5-point scale ranging from excellent to poor. For current health, four items on the SF-20 measured the workers' perception of their current overall health ( $\alpha = 0.81$ ). A measure of mental health was derived from five items of the SF-20 that measure anxiety, depression, loss of behavioral-emotional control, and psychological well-being ( $\alpha = 0.84$ ). All summary measures were rescaled to have a range 0 to 100. Higher values on these measures are indicative of better health and function. AQ: C

Measures related to workplace characteristics and/or perceived cost of filing for workers' compensation used three justice scales. Organizational justice is a six-item scale measuring the extent to which the respondent views the process by which decisions made at the workplace as fair.<sup>7</sup> Interactional justice is a seven-item scale measuring the extent to which managers treat the respondent with respect.<sup>8</sup> Distributive justice is a five-item scale measuring the extent to which the worker views rewards at work as being consistent with certain aspects of performance.<sup>9</sup> Job satisfaction was measured by using a five-item scale developed by Eaton et al.<sup>10</sup>

Features of work were measured by using scales for control, degree of physical activity, and motion. These three scales were derived from the inventory of criteria for workplace evaluation developed by Nagi.<sup>11</sup> Using results of the reproducibility of the self-reported measures by Wik-

torin et al<sup>12</sup> to identify questions with the highest reproducibility, we selected three items for the control scale, two for the degree of physical activity, and four for motion.

### Statistical Analysis

The two outcomes evaluated were whether or not the worker with repetitive trauma filed a claim for workers' compensation and (because of the importance of being off from work for 7 consecutive days to be eligible for wage loss replacement) whether or not the worker was off from work for 7 consecutive days. Michigan's workers' compensation law provides reimbursement for all medical costs arising from a work-related condition but provides for wage replacement only if the injured worker is off from work for 7 or more consecutive days. We used  $\chi^2$  tests to compare proportions and *t* tests to compare means. Continuous variables were analyzed as such and again after classifying into two or more categories. For summary scales derived from the SF-20, we followed the approach suggested by Ware et al<sup>3</sup> to account for missing data in items comprising a given summary scale. When more than 50% of the elements making up the scale were missing, the scale was set to missing. If less than 50% of the items were missing, the mean value of the non-missing items was substituted for the missing items before the summary measure was computed.

Multivariable logistic regression models were developed to determine whether the likelihood of filing a claim was independently associated with workers' demographic characteristics, type of repetitive trauma and severity, health status, factors describing their work environment, and other job characteristics. Because of the large number of potential factors that might be associated with claimant status, preliminary regression models were developed within six broad domains. These described (1) workers' sociodemographic characteristics, (2) job and

employment characteristics, (3) injury type and severity, (4) general health and functioning, (5) workers' perception of their work environment, and (6) workers' interaction with their health care provider. Within each domain each covariate was evaluated in a univariable model and then with other covariates in a multivariable logistic model. We considered all potential predictors with *P* values of less than 0.20 for inclusion in models that controlled for several variables simultaneously. Variables with *P* values of less than 0.05 were retained in the final model. Selected interactions and variables excluded at the preliminary model building stage were tested for inclusion in the final model, but none were found to materially affect the predictive power of the final model. Statistical Analysis System software version 6.12 (SAS Institute Inc, Cary, NC) was used in all analyses.

### Results

A total of 1598 workers completed a questionnaire. During the 12-week time period, 2703 reports of back, shoulder, or wrist repetitive trauma were received. Among the 2703 reports: 490 individuals could not be reached by phone because we had a non-working or wrong number; 22 were not interviewed because they did not speak English; 12 were incapacitated by cancer, mental disorder, etc, or were deceased; and 581 refused. Various reasons for refusals included: interview too long (18%), not interested (37%), too personal (33%). From all the reports received, we interviewed 59.1% of the workers. From the cohort of 2179 individuals who were reachable and capable of responding to the questionnaire, we interviewed 73.3% of the workers. Demographics of respondents and non-respondents are shown in Table 1.

A total of 397 (25.1%) workers filed a workers' compensation claim, 1185 did not, 13 did not know, and 3 refused to answer the questions. Among the 397 who indicated that

they filed; 134 were receiving benefits to cover medical costs only, another 7 were receiving benefits for medical costs but didn't know if they were receiving wage replacement, 197 were receiving benefits for wage replacement, 54 responded that they weren't receiving benefits for either wage replacement or medical benefits, and 5 didn't know. Of the 313 workers who were off from work for 7 or more consecutive days and eligible for wage replacement, 236 (75.4%) filed for workers' compensation.

The mean age was 39.2 years (range, 18 to 64 years) and 59% were male (Table 2). Men and women did not differ significantly by age (*P* = 0.58), but they did differ on the type of the reported injury (*P* < 0.001, 2 DF). Women had a higher proportion of wrist injuries (46.4%) than injuries to the back (40.2%) or shoulder (33.6%). Over 91% of the respondents had completed at least high school, 93.5% were members of unions, and 95% had health insurance. Nine percent of respondents did not answer questions on annual income, weekly earnings, and household size including number and ages of children residing at home. Our participants were predominantly employed by the automobile manufacturing industry (94%).

Workers gave the following reasons for not filing a workers' compensation claim: 705 (59.1%) said the injury was not serious enough; 694 (58.3%) said they did not expect to miss work; 337 (28.3%) said they expected to miss work but knew they would receive sick-leave or short-term disability from their employer; 427 (35.9%) said their medical expenses were covered by other insurance; and 242 (20.4%) didn't think their injury was work-related. The rest of the results are based on the univariate and multiple logistic regression analyses.

### Demographic Characteristics

Among personal variables (age, gender, race, education, marital sta-

**TABLE 1**  
Demographic Characteristics of Respondents and Non-Respondents

	Respondents		Non-Respondents		$\chi^2$	P Value
	n	%	n	%		
Age						
<31	392	24.5	330	30.2	15.01	0.0018
32-39	387	24.2	235	21.6		
40-45	391	24.5	222	20.3		
46+	428	26.8	304	28.9		
Total	1598		1091*			
Gender						
Male	944	59.1	695	62.9	3.84	0.05
Female	654	40.9	410	37.1		
Total	1598		1105*			
Race						
White	1054	67.5	93	52.8	195.00	<0.0001
Black	442	28.3	26	14.8		
Other	65	4.2	57	32.4		
Total	1561		176*			

\* Total varies because demographic characteristic was unknown.

tus, children under 13 years living at home, smoking status), only age was predictive of claimant status ( $P < 0.006$ ), with older workers more likely to file for compensation. Both marital status and smoking status increased the odds ratios for filing a claim, but the odds ratios were not statistically significant (Table 3).

### Job Characteristics

Our questionnaire elicited information of the type of work and hours of work at the time of the injury. Part-time employment was defined as a workweek of less than 35 hours. These workers were no less likely to file for compensation than those in full-time employment ( $P = 0.30$ ). The likelihood of filing a workers' compensation claim was statistically significantly increased among workers with the lowest income. Consistent with the relationship with income, unskilled workers were more likely to file than skilled workers, although the association was not statistically significant (OR, 1.36; 95% CI, 0.94 to 1.98,  $P = 0.10$ ). Increased length of employment with the present employer was strongly associated with filing a workers' compensation claim ( $\chi^2$  for trend, 15.4,  $P < 0.001$ ). Income and length of employment with present em-

ployer remained significant in multiple logistic regression analysis.

### Injury Type and Severity

We considered four variables that classified workers by the number of days they were unable to work as a result of their injury, their injury type, its severity, and whether the present injury was a recurrence of a previous one. Respondents who were off from work for 7 or more days were significantly more likely to file a claim (unadjusted OR, 22.58; 95% CI, 16.56 to 30.82). Workers with back injuries were more likely (although not statistically significant), and those with shoulder injuries were less likely, to file for compensation compared with those with wrist injuries. Workers whose present injury was a recurrence of a previous injury were more likely to file ( $P = 0.01$ ). Also, severity of injury was a strong predictor of filing. Multiple logistic regression analysis with injury type, severity, and dichotomous variables for recurrence of a previous injury (1, if yes; 0, if no), for days off from work (1, if 7 or more days; 0, if <7 days), and number of health limitations in role and physical functioning revealed that these limitations, severity of injury, and days off from work remained significant.

### Health Status

Each of the five summary measures on health and functioning were strongly associated with the likelihood of filing a claim in the univariate analyses ( $P < 0.001$ ). However, in the multiple logistic regression model only the measure on current health remained significant.

### Workers' Perception of Their Job

Each of the three measures of injustice, the worker's perception of their employer's attitude and the worker's dissatisfaction with coworkers and their job were strongly associated with the likelihood of filing a claim in the univariate analysis. In the multiple logistic regression model, only the worker's dissatisfaction with coworkers remained significant.

### Worker Interaction With Health Care Provider

Over 55% of the workers reported seeing their company physician for the reported injury. We included the company nurse in this category. All other providers were classified as family physicians or physicians linked to a health maintenance organization, specialists including sur- AQ:F

**TABLE 2**  
 Characteristics of Respondents (n = 1598)

Characteristic	Total		Injury Type					
	n	%	Back		Shoulder		Wrist	
			n	%	n	%	n	%
Age (y)								
18-31	392	24.5	30	26.8	118	18.7	244	28.5
32-39	387	24.2	30	26.8	166	26.3	191	22.3
40-45	391	24.5	27	24.1	171	27.1	193	22.6
46+	428	26.8	25	22.3	176	27.9	227	26.5
Gender								
Male	944	59.1	67	59.8	419	66.4	458	53.6
Female	654	40.9	45	40.2	212	33.6	397	46.4
Race								
White	1054	67.5	67	62.0	442	71.4	545	65.3
Black	442	28.3	35	32.4	148	23.9	259	31.1
Other*	65	4.2	6	5.6	29	4.7	30	3.6
Education								
<High school	132	8.4	9	8.1	58	9.3	65	7.7
High school	703	44.5	45	40.5	286	45.9	372	44.0
Some college	560	35.5	40	36.0	213	34.2	307	36.3
Other degrees	184	11.7	17	15.3	66	10.6	101	11.9
Marital status								
Married	925	58.5	56	50.9	379	60.6	490	57.9
Single	355	22.5	32	29.1	123	19.7	200	23.6
Other†	301	19.0	22	20.0	123	19.7	156	18.4
Employment								
Part-time	124	7.8	15	13.5	52	8.3	57	6.7
Full-time	1463	92.2	96	86.5	577	91.7	790	93.3
Days off from work								
<7	1205	77.4	72	66.1	488	79.0	645	77.7
7-13	58	3.7	7	6.4	24	3.9	27	3.3
14-20	44	2.8	4	3.7	18	2.9	22	2.7
21-27	19	1.2	0	0.0	11	1.8	8	1.0
28+	231	14.8	26	23.9	78	12.5	128	15.4
Claimant status								
Yes	397	25.1	37	33.3	136	21.8	224	26.4
No	1185	74.9	74	66.7	487	78.2	624	73.6
Income								
<\$40K	372	25.2	25	24.0	131	22.4	216	27.4
\$40-\$59K	477	32.3	33	31.7	211	36.1	233	29.6
\$60-\$79K	350	23.7	25	24.0	139	23.8	186	23.6
≥\$80K	278	18.8	21	20.2	104	17.8	153	19.4
Length of current employment (y)								
<1	112	7.0	5	4.5	38	6.1	69	8.1
1-5	430	27.0	33	29.5	140	22.3	257	30.1
6-10	231	14.5	24	21.4	89	14.2	118	13.8
11-20	377	23.7	21	18.8	164	26.1	192	22.5
21+	444	27.9	29	25.9	197	31.4	218	25.5
Smoking status								
Non-smoker	611	38.4	42	37.8	220	35.0	349	40.9
Past smoker	344	21.6	28	25.2	132	21.0	184	21.6
Current smoker	637	40.0	41	36.9	276	43.9	320	37.5

\* Other = American Indian/Asian or Pacific Islander/biracial.

† Other = widowed/divorced/separated.

geons of any type, and physical and occupational therapists.

Compared with workers who saw their company physician, those in each of the other three groups were

more likely to file for workers' compensation, with the odds of filing being greatest among those who were seen by specialists and surgeons. Workers who were placed on

restrictions on activities by their provider were also more likely to file. These associations remained in the multivariate analysis. Respondents' perception of the quality of care and

**TABLE 3**  
Univariable Logistic Regression Analysis on Predictors of Claimant Status

Variable (Referent)	Subgroup	OR	95% CI	P Value
Age group (<31 y)	32–39	1.64	1.16–2.30	0.006
	40–45	1.47	1.05–2.08	
	46+	1.73	1.24–2.41	
Age	1 SD increase	1.21	1.08–1.35	<0.002
Gender (male)	Female	0.94	0.75–1.19	0.605
Race (white)	Black	1.20	0.93–1.54	0.384
	Other	1.12	0.63–1.97	
	High school	0.85	0.56–1.28	
Education (<high school)	Some college	0.76	0.50–1.17	0.573
	Other degrees	0.75	0.45–1.25	
	Single	0.85	0.64–1.14	
Marital status (married)	Other	1.26	0.94–1.68	0.098
	<\$40K	2.17	1.48–3.17	
Income (≥\$80K)	\$40–\$59K	1.58	1.09–2.28	<0.001
	\$60–\$79K	1.59	1.08–2.36	
	Unknown	1.06	0.61–1.85	
	Yes	1.12	0.89–1.42	
Children under 13 years at home ( <i>n</i> )	Yes	1.12	0.89–1.42	0.33
Smoking (nonsmoker)	Past smoker	1.33	0.97–1.80	0.084
	Current smoker	1.30	1.00–1.69	
Off for 7 days (<7 days)	7+ days	22.58	16.56–30.82	<0.001
Injury type (wrist)	Back	1.39	0.91–2.13	0.017
	Shoulder	0.78	0.61–0.99	
Recurrence of injury ( <i>n</i> )	Yes	1.43	1.10–1.92	0.01
Severity	1 SD increase	1.64	1.46–1.85	<0.001
No. of health limitations	1 unit increase	1.31	1.24–1.39	<0.001
Unskilled worker ( <i>n</i> )	Yes	1.36	0.94–1.97	0.10
Part time worker ( <i>n</i> )	Yes	0.80	0.51–1.24	0.30
Motion	1 SD increase	1.10	0.98–1.24	0.11
Exertion	1 SD increase	0.98	0.80–1.00	0.06
Control	1 SD increase	0.89	0.79–1.00	0.05
Length of employment (<1 y)	1–5	2.94	1.48–5.85	<0.001
	6–10	3.69	1.81–7.53	
	11–20	3.55	1.78–7.07	
	21+	4.52	2.29–8.92	
Current health	1 SD increase	0.61	0.55–0.69	<0.001
General health	1 SD increase	0.85	0.76–0.95	<0.001
Mental health	1 SD increase	0.75	0.68–0.84	<0.001
Role functioning	1 SD increase	0.56	0.50–0.63	<0.001
Physical functioning	1 SD increase	0.63	0.57–0.71	<0.001
Employer attitude	1 SD increase	0.76	0.68–0.85	<0.001
Worker satisfaction with coworkers (satisfied)	Not satisfied	1.80	1.18–2.72	0.007
Job satisfaction	1 SD increase	0.84	0.75–0.93	0.002
Distributive justice	1 SD increase	0.83	0.74–0.93	0.002
Interactional justice	1 SD increase	0.83	0.74–0.93	0.001
Organizational justice	1 SD increase	0.85	0.75–0.95	0.005
Primary treatment physician (company physician)	Family/HMO	2.09	1.52–2.88	<0.001
	Specialist/surgeon/orthopedic	8.11	5.80–11.35	
	Physical/occupational therapist	2.23	1.51–3.31	
Restrictions on activity ( <i>n</i> )	Other	1.86	0.85–4.05	<0.001
	Yes	3.63	2.79–4.73	
Insensitivity of provider (never)	Rarely/sometimes	1.24	0.95–1.61	0.19
	Often/always	1.24	0.90–1.71	
Decisions without your best interest (never)	Rarely/sometimes	1.28	0.98–1.68	0.11
	Often/always	1.29	0.93–1.78	
Not given thorough explanation (never)	Rarely/sometimes	1.16	0.88–1.53	0.34
	Often/always	1.23	0.90–1.67	

sensitivity of their health care provider was not predictive of filing a workers' compensation claim.

### Off From Work for 7 or More Days

In univariate analysis, the factors associated with being off from work for 7 or more consecutive days were the same as those associated with filing a claim, except that blacks were more likely to be off from work for 7 or more consecutive days (OR, 1.38; 95% CI, 1.06 to 1.81). This association did not remain significant in multivariate analysis, for which the factors being off from work for 7 or more consecutive days were exactly the same as the factors associated with filing a claim.

### Discussion

We found that in a survey of 1598 workers reported with known or suspected repetitive trauma of the wrist, shoulder, or back, only 397 (25%) filed for workers' compensation. The results of this survey confirm the results of our previous study that only a minority of workers with work-related illness, including repetitive trauma, file for workers' compensation.<sup>1</sup> In our previous study, which was based on a matching of administrative databases that included only workers who filed for wage replacement and not those who filed for reimbursement of medical care costs, we estimated that between 12% and 63% of workers with repetitive strain injuries had filed for workers' compensation. Our results in this report indicate that the actual percentage who filed for wage replacement and/or medical cost reimbursement is toward the lower end of our previous estimates (only 25%). Although workers' compensation laws differ among the 50 states, there are no particular characteristics of the Michigan worker compensation system that would make this finding unique to Michigan. It should be emphasized that our results are for occupational illnesses, not injuries.

The factors that were significantly associated with filing a workers' compensation claim are increased length of employment, lower annual income, worker's dissatisfaction with coworkers attitude, physician restrictions on activity, type of physician providing treatment, length of time off from work, decreased current health status, and increased severity of the illness (Table 4). No association was found with gender, race, education level, or part-time versus full-time work. In univariate analysis a lack of job satisfaction, the worker's view of a lack of fairness in the work decision making process, the feeling of not being treated with respect at work, and the feeling that rewards were not distributed in accordance with job performance were all associated with an increased likelihood of filing a workers' compensation claim. None of these attitudes remained predictive in the multivariate model. No association was found with the workers' perception of the treating physician regarding insensitivity of the provider, whether medical decisions were made in the best interest of the patient, or whether the health care provider gave a thorough explanation.

Severity of the illness was the most significant predictor. Measures of severity included length of time off from work; utility scales of general health, function, and severity; and medical restrictions. Treatment by specialists, family doctors, and physical therapists and chiropractors was associated with increased likelihood of filing in comparison with treatment by health care providers associated with the company. Although this could be interpreted that company health care providers do a better job of reducing workers compensation costs, the more likely explanation is that individuals with increased severity were more likely to receive medical treatment beyond that offered by the company medical department. Michigan requires workers to be treated by a physician of the company's choice for the first 10

days after an injury. Almost all of the workers in this study were from large employers with in-house medical departments.

The most significant predictor of filing was the severity of illness measure of 7 or more consecutive days off from work. The risk factors for 7 or more consecutive days off from work were the same as for filing a workers' compensation claim, except that blacks were more likely to be off for more than 7 consecutive days (although race was not a predictor of who filed a workers' compensation claim).<sup>T4</sup>

How do our results compare with those of previous studies? Unlike other studies in which variation in claim filing behavior could be based on either the variation in becoming sick or the variation in filing a claim, all subjects in our study were diagnosed with a work-related repetitive illness, and we assessed variation only with regard to filing a claim. Others have reported that a lower income is associated with poor recovery after injury. Lower income has been considered a surrogate of the lack of adequate health insurance and access to appropriate rehabilitation services. In this relatively homogenous population in which almost all workers had the same comprehensive health insurance, low income remained a significant predictor of days off from work and filing for workers' compensation. One possible explanation for this is the fact that in Michigan, as in most states, workers' compensation wage replacement benefits tend to be less generous relative to ordinary wages for higher income workers. Certain typical features of low-income jobs, such as high physical demands or excessive tedium, may also be important factors. Similar to our results, other investigators have reported that increasing age is associated with an increasing absence from work after an injury.<sup>13,14</sup>

The 1990s have seen legislative reforms of workers' compensation laws in many states. Two recent

**TABLE 4**  
Final Model Adjusted Odds Ratios for Predictors of Claimant Status ( $n = 1533$ )

Variable	<i>n</i>	Unadjusted OR	95% CI	Adjusted OR	95% CI
<i>Demographics</i>					
<i>Income</i>					
≥\$80K	263	1.00		1.00	
<\$40K	361	2.12	1.44–3.20	1.75	1.06–2.88
\$40–\$59K	459	1.59	1.09–2.32	1.55	0.95–2.52
\$60–\$79K	342	1.62	1.09–2.41	1.62	0.98–2.70
Unknown	108	1.11	0.63–1.96	1.05	0.51–2.17
<i>Job characteristics</i>					
<i>Length of employment (y)</i>					
<1	106	1.00		1.00	
1–5	421	2.80	1.40–5.58	2.36	1.03–5.42
6–10	220	3.52	1.72–7.20	1.76	0.73–4.25
11–20	358	3.47	1.74–6.93	2.34	1.01–5.47
21+	428	4.19	2.12–8.29	3.01	1.31–6.90
<i>Injury and severity</i>					
Off from work <7 days	1227	1.00		1.00	
Off from work ≥7 days	306	22.48	16.43–30.75	14.85	10.57–20.88
<i>Severity of injury</i>					
1 SD increase		1.62	1.44–1.83	1.24	1.06–1.46
<i>Health status</i>					
<i>Current health</i>					
1 SD increase		0.61	0.55–0.69	0.82	0.70–0.96
<i>Perception of work environment</i>					
<i>Worker satisfaction with coworkers</i>					
Satisfied	1432	1.00		1.00	
Not satisfied	101	1.77	1.16–2.71	1.76	1.01–3.06
<i>Interaction with health care provider</i>					
<i>Primary treatment physician</i>					
Company physician	871	1.00		1.00	
Family/HMO	276	2.02	1.47–2.78	1.33	0.89–2.01
Specialist/surgeon/orthopedic	199	8.24	5.88–11.55	3.63	2.37–5.55
Physical/occupational therapist	152	2.23	1.51–3.31	2.15	1.35–3.43
Other	35	1.84	0.84–4.01	0.79	0.29–2.12
<i>Restrictions on activity</i>					
No	655	1.00		1.00	
Yes	878	3.55	2.72–4.64	2.16	1.55–3.00

publications have reviewed the statutory changes and their impact on the system.<sup>15,16</sup> Both of these reviews point out that an important component of recent changes has been limits on compensability. These restrictions have come in a variety of forms, including limiting the compensability of certain conditions such as repetitive trauma disorder and mental disabilities, limitations of compensation for the aggravation of preexisting conditions, and procedural and evidentiary changes that make it more difficult to prove compensability.

The rationale for these changes has been based on anecdotal evidence and arguments that the cost is

too high rather than any empirical evidence that inappropriate people are being compensated. Indeed, there has been very little research (other than cost data) that sheds light on the questions of whether definitions of compensability are too broad or too narrow. Such research is, of course, very difficult to do because most workers' compensation research is based on administrative databases that include information only about the people who received benefits or made a formal claim for benefits and exclude the "universe" of people who might be entitled to benefits. The surveillance database maintained by the state of Michigan, which is the basis for this study,

provides a unique opportunity in this regard.

No doubt the findings reported here will come as a surprise to policy makers who have seen fit over recent years to restrict compensability. To those whose primary objective is controlling the cost of the system, these findings will raise concern because they suggest the possibility that, given proper education and opportunities, there are significantly more people who may be entitled to workers' compensation benefits.

To those whose primary concern is the provision of adequate benefits to workers, these findings will reinforce their concern that recent reforms may be depriving injured individuals

of benefits under workers' compensation acts. Spieler and Burton<sup>15</sup> and McCouskey<sup>16</sup> argue that the net effect of the recent decade of reforms has been to emphasize affordability of costs over the adequacy of benefits to injured workers. Although many of the people who did not claim benefits have relatively less severe disabilities, there were, nevertheless, 450 (37.7%) individuals who did not file even though they felt that they had a serious enough condition to file a claim.

There were a number of limitations to this study. We were able to reach and interview 60% of the workers reported with these conditions. The non-respondents had a slightly higher percentage of younger and older workers and men, and a lower percentage of whites and blacks than the respondents. However, similar percentages of non-respondents (22.5%) and respondents applied for workers' compensation for wage replacement.

Our disease reports were received mainly (>90%) from large, unionized auto manufacturers with in-house medical departments. Workers generally had comprehensive health insurance, sick-leave benefits, and job security as defined within their union contract. Accordingly, we could not examine whether these factors were important in determining whether a worker would or would not file a workers' compensation claim. Our results cannot be generalized to other workforces that do not meet these characteristics. Some authors have suggested that workers' compensation has become a system for low-wage workers without other alternatives. Workforces with less comprehensive health and sick-leave benefits might file claims more frequently inasmuch as they have no alternative to the workers' compensation system. On the other hand, non-unionized workforces with less knowledge of their rights and less job security might file less frequently.

Severity of disease was a strong predictor of filing. However, severity was not measured by physical examination or by laboratory testing but rather by using prevalidated scales based on workers' responses. Additionally, because this was a cross-sectional study we do not know whether the workers' perception of their health status and role functioning is a consequence of the severity of their condition or reflects the workers' psychological state. Either way, a low score on the health status and role functioning scales was predictive of filing a workers' compensation claim. Lack of job satisfaction was a significant predictor in the univariate analysis but did not remain significant in the multivariate model, which included health status and role functioning.

We plan to conduct follow-up telephone interviews of this cohort in a year and a half. With this longitudinal component we hope to be able to assess the consequence of having work-related repetitive trauma among individuals who do and do not file for workers' compensation. Additionally, we will be able to examine the predictive value of responses from the first survey on filing in the future.

In summary, we found that only 25% of workers with work-related musculoskeletal condition of the neck, back, and upper extremities file for workers' compensation. Measures of severity are the best predictor of filing. Lower income, increased length of employment, and the worker's dissatisfaction with co-workers were also significant predictors. Because the population we studied consisted of unionized autoworkers with health insurance, our results may not be generalizable to the total workforce.

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# Fear of Filing

## Why Some Workers Do Not File for Work Comp

A group of researchers at Michigan State University is conducting a study sponsored by the National Institute of Occupational Safety and Health. We are examining a database of individuals who have been reported (usually by their company doctor) to a state agency as having a known or suspected occupational disease.

As we reported earlier, we found that a significant number have not filed a workers' compensation claim.<sup>1</sup> In fact, about 75 percent of the total group has not filed, and even among those who lost seven consecutive days and are clearly entitled to wage loss benefits, about 23 percent have not filed. This article will look at the reasons workers gave for not filing and some other concerns they expressed. The findings are summarized in Table 1.

### Not Work-Related

Of the 1,208 workers who reported that they have not filed a workers' compensation claim, 242, or 20 percent, indicated that they did not file because they did not think the injury was work-related. This is, of course, a very logical reason for not filing. The result is puzzling, however, because most of the reports come from company doctors.

If these workers had gotten into the workers' compensation system in some other way, we might say "Ah-ha, some attorney has talked them into claims that are really undeserving." That is not the case, however. Some medical person, in the vast majority of cases a company doctor, has felt that he or she should report this case as a known or suspected occupational disease. It is possible that some physicians are overreacting, that they believe there is no adverse consequence for filing

too many forms but that there might be a problem if they filed too few.

There is, of course, another possibility. It is possible that many of these workers do indeed have problems that were caused by their employment but the workers do not realize this and have never been told.

### Not Serious Enough

We offered workers two explanations for not filing that are related to the severity of the problem. In one question the workers were asked if

they did not file because they did not expect to miss work because of the injury. In the other, the workers were asked if they did not file because the injury was not serious enough.

Table 1 lists the percentage of workers who replied positively to each of the questions discussed here. Of the workers who did not file a claim, 73 percent gave one of these two explanations.

Since all of the workers received at least some form of medical attention, all of them could have filed for workers' compensation benefits to

**Table 1**

**Percent of Workers Giving Positive Answers to Issues Listed**

<b>Work-Related</b>	
I did not think the injury was work-related.	20%
<b>Seriousness</b>	
The injury was not serious enough.	58%
I did not expect to miss work because of the injury.	57%
One or more seriousness issues	73%
<b>Other Benefits</b>	
I knew I would receive sick leave or short-term disability pay from my employer.	28%
My medical expenses were covered by other insurance.	35%
One or more other benefit issues	47%
<b>Fear (Among those who did not file)</b>	
I was afraid my co-workers would think I was faking or exaggerating my injury.	8%
I was afraid my supervisor would think I was faking or exaggerating my injury.	10%
I was afraid I would not be promoted or get other opportunities on the job.	10%
I was afraid I would lose my job.	8%
I was afraid health care providers would not want to treat WC cases.	6%
One or more fear issues	20%
<b>Retaliation (Among those who did file)</b>	
I was discriminated against or harassed.	9%
I am concerned I might lose my job.	5%
I am concerned about losing future promotions and other job opportunities with my employer.	11%
One or more retaliation issues	44%

cover their medical costs. It is possible, however, that some of the workers interpreted the question about filing to mean filing for wage loss benefits. The high percentage of positive answers to the seriousness questions suggests that this may be the case.

Accordingly, it is possible that workers did not understand the question in the same way we did. It is also possible that the workers simply did not understand the system. Of the workers who said they did not file because they thought their condition was in some way not serious enough, five percent also told us that they were off for at least seven consecutive days. These workers certainly had problems that were serious enough to apply for benefits. Furthermore, as indicated above, 23 percent of the workers who were off for seven or more consecutive days did not file for benefits.

### Benefit Substitution

The fact that a substantial number of workers who might be entitled to workers' compensation benefits are not applying for those benefits raises the possibility that the costs of work-related injuries are being shifted to other benefit programs. We asked two questions that dealt directly with this issue.

Workers who did not file were asked if this was because they knew they would receive sick leave or short-term disability pay and whether they did not file because their medical expenses were covered by other insurance. Forty-seven percent of the workers who did not file gave a positive answer to one or both of these questions.

### Fear Factor

Of the people who did not file, we asked five questions which suggested that in some way they did not file because of concern regarding retribution. This had to do with fear that a co-worker or supervisor

would think that they were exaggerating, fear of loss of promotion or loss of job, or difficulty obtaining treatment. Twenty percent of the workers indicated that they somewhat or strongly agreed with one or more of these reasons for not filing.

Among the workers who did file, we asked three questions about concern for possible retribution; they dealt with discrimination, job loss, and loss of promotion. Forty-four percent of the workers who did file expressed concern in one or more of these areas.

I hasten to add that these findings are not evidence that workers were in fact discriminated against. It is simply evidence that they express these concerns. The findings are nonetheless surprising. This is especially true since because of the nature of the reporting system, the vast majority of the workers in this sample were employed by Michigan's largest companies and represented by the United Auto Workers.

We hope that further analysis of the data and a second round of interviews will add to our understanding of these issues. We will continue to report on them here and in other articles.

### Researchers

The researchers involved in this project include: Jeff Biddle, Ph.D., Department of Economics; Joseph Gardiner, Ph.D., College of Human Medicine; Andrew Hogan, Ph.D., College of Human Medicine; Mary Jo Reilly, M.S., College of Human Medicine; Karen Roberts, Ph.D., School of Labor and Industrial Relations; Kenneth Rosenman, M.D., College of Human Medicine; Qiuyun (Jenny) Wang, M.S., College of Human Medicine; and Edward M. Welch, J.D., School of Labor and Industrial Relations, all at Michigan State University.

1. See "Some Workers Don't File," *On Workers' Compensation*, December 1997, page 1. 

## Practical Points

- ✓ A substantial number of workers, even in very sophisticated workplaces, do not seem to have a thorough understanding of their rights in the workers' compensation system.
- ✓ There appears to be a substantial number of cases in which disabilities that appear to be work-related are taken to other disability systems.
- ✓ A substantial number of workers appear to fear adverse consequences of filing a workers' compensation claim.

# Ergonomics at School

By Barbara A. Morris

While ergonomic assessments and on-site injury prevention programs are typically associated with large companies or manufacturing facilities, the Battle Creek Public Schools have demonstrated that these strategies can work — even for a handful of people.

Dianne Hatley, personnel assistant at the Battle Creek Public Schools in Battle Creek, Michigan, has instituted an injury prevention program to address the needs of the school district's 16 clerical and professional employees, ranging from 27 to 63 years of age.

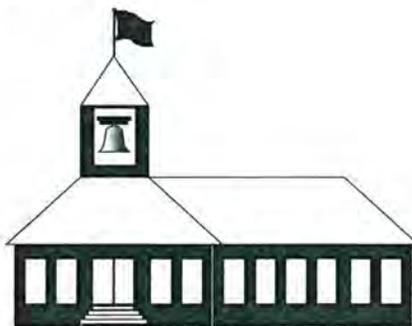
As Hatley explains, when the school district was insured by a workers' compensation carrier, loss control and prevention was relegated primarily to its insurer. When the district became self-insured several years ago and began to witness its own workers' compensation claim dollars "going out the door," it quickly became more attuned to the importance of identifying — and responding to — workplace exposures.

Repetitive injuries, specifically carpal tunnel syndrome, were among the workplace injuries that emerged as warranting preventive strategies.

## The Plan

In 1994, Hatley brought in a representative from Rehab & Associates, a local rehabilitation and physical therapy organization, who conducted an on-site evaluation of the workstation of each of the school district's central office's clerical and professional employees. The position of keyboards, back support provided by chairs, and the location of the computer screen in relation to the employee's eye-level vision were among the ergonomic work site components explored in depth.

Employees were also given literature outlining preventive measures



to avoid carpal tunnel syndrome on the job as well as instructions on how to perform certain non-work activities that could nevertheless contribute to its onset. For example, the proper position of the hands on a car's steering wheel, or on a bicycle's handle bars, was among the lifestyle activities explored as they related to carpal tunnel syndrome.

"The goal was both to inform and accommodate," recalls Hatley.

## Costs Small

Hatley stresses that in most instances, workplace accommodations did not translate into large expenditures. Providing a worker with wrist pads, raising a keyboard, and placing a cushion on a chair to increase comfort and back support were among the remedies to workstation complaints that proved successful. Hatley adds, "A lot of what we did was not expensive — it was just common sense."

These interim changes, Hatley continues, were a precursor to a district-wide renovation that over a four-year period included installation of wider computer monitors, new office furniture, and other equipment aimed at reducing the likelihood of carpal tunnel syndrome, back pain, and other physical ailments among employees.

Renovation of the district's administrative offices and some school buildings, completed in 1997, has been followed with an evaluation of workplace functions, also with an

eye toward reducing competitive activities through a redesign of certain workflows. For example, Hatley reports that in some instances, workers are sharing functions, thereby breaking up the amount of uninterrupted time each spends in front of a keyboard.

According to Hatley, last year only one employee reported experiencing hand and wrist pain, which was alleviated with prescribed exercises and preventive literature.

Hatley also reports that the prevention program initiated at the Battle Creek Public Schools administrative offices was expanded on a trial basis to some of the district's schools. (The district comprises four junior high, one middle, and one senior high school.) The school district's director of facilities and maintenance has also been brought into the program by providing training and assistance to custodial maintenance staff in improving workplace facilities from an ergonomic standpoint.

Hatley believes many workplace functions that can potentially result in a workers' compensation claim can be addressed effectively and with relatively moderate expense by taking the time to evaluate workstations and workers' needs.

"We realized many of these potential hazards could be managed," says Hatley, "but nobody knew how because nobody asked the question." Today, the questions are being asked — and answered — with both employees and the school district reaping the rewards. E

## Practical Point

- ✓ Simple ergonomic strategies can be effective for medium-size employers.

## Some Workers Don't File

### A Significant Number of People May Be Passing Up Their Right to Comp

It is assumed by most employers and insurers that everyone who could conceivably be entitled to workers' compensation benefits applies for them. In fact, it is often said that a great many people who are not entitled to benefits apply for them. On the other hand, many researchers who look at the issue from the public health perspective and advocates for workers argue that there are in fact many people who suffer work-related disabilities (particularly occupational diseases as opposed to single event injuries) who do not apply for workers' compensation benefits.

A group of researchers at Michigan State University has investigated this question under a grant from the National Institute for Occupational Safety and Health. It appears that there are in fact a substantial number of people who are identified as having an occupational disease who do not seek assistance from workers' compensation.

#### Finding the People

As far as we know, there have until now been no serious studies of

this issue. One of the primary obstacles has been identifying the individuals. How do you find people who could have applied but did not? We were able to identify potential claimants by looking at a database maintained by the state of Michigan. A Michigan statute requires physicians and others to file a report concerning cases of known or suspected occupational diseases.

This requirement is not uniformly observed. The average family doctor appears to be unaware of this requirement or perhaps is too busy to observe it. The result is that the vast majority of these reports come from a very narrow group of physicians. For the individuals covered in the sample we used, nearly all of the reports come from occupational physicians who saw the patient at the request of his or her employer.

This has some important implications for the study. We were not looking at people whose attorneys told them that they might have a claim or who went to doctors chosen by their attorneys. We are instead looking at individuals who are identified by a company doctor as having a known or suspected occupational disease. Thus the individuals in this group are very likely to be entitled to coverage under workers' compensation.

#### The Study

Our study focused on individuals who were reported in early 1997 as having an occupational disease af-

fecting their wrist or hand, shoulder, or back. Table 1 shows the breakdown of the population we studied.'

We began with the information about these 1,609 individuals contained in the database formed by the reporting physicians. We then conducted personal telephone interviews with these individuals within a few weeks after the time their occupational disease was reported.

(The data in this article is based on the above information. As part of the continuing research project, we will conduct a follow-up interview

*(continued on page 3)*

<b>Disabilities Covered</b>	
Wrist or hand	862
Shoulder or arm	635
Back	112
<b>Total</b>	<b>1,609</b>

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**WC** **On Workers' Compensation**

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*On Workers' Compensation* is available in both Michigan and national editions. They are identical, except that the Michigan edition includes supplemental pages that discuss issues unique to Michigan.



## Edward M. Welch

Ed Welch was director of Michigan's Bureau of Workers' Disability Compensation from 1985 through 1990. Before that, he was a claimant's attorney. He is now a member of the faculty of the School of Labor and Industrial Relations at Michigan State University.

Ed has published many books and articles. He is best known for his ability to take complicated issues related to workers' compensation and explain them in a simple, straightforward manner.

He was elected a charter member for workers' compensation of the National Academy of Social Insurance. He served as vice president of the International Association of Industrial Accident Boards and Commissions and co-chair of the Workers' Compensation Committee of the American Bar Association. He serves as the executive secretary to the Labor/Management Discussion Group on Workers' Compensation, which is co-chaired by the National Association of Manufacturers and the AFL-CIO. He is a member of the Board of Directors of the Institute for Work and Health in Toronto.

In 1990 he received the outstanding achievement award in workers' compensation, which is presented by the National Association of Manufacturers, the Alliance of American Insurers, and the American Insurance Association. (Not bad for a former claimant's attorney.)

### Publications of General Interest:

*Employer's Guide to Workers' Compensation* provides a national overview of the workers' compensation system with a checklist of over 400 strategies used by the most successful employers to reduce injuries and costs. This book is published by the Bureau of National Affairs in Washington, D.C. For more information or to order, call BNA at (800) 960-1220.

*Why Some Employers Have a Better Workers' Compensation Experience Than Others* describes research that showed why some employers do so much better at workers' compensation than others.\*

### Michigan Publications:

*Fundamentals: Workers' Compensation in Michigan* is a 64-page booklet that provides an overview of workers' compensation law in Michigan. It is written in terms understandable to both workers and employers.\*

*Michigan Directory on Workers' Compensation* is an annual directory that provides up-to-date listings and statistics concerning workers' compensation in Michigan. It also lists addresses and phone numbers for important bureau offices and providers of workers' compensation-related services.\*

*Workers' Compensation in Michigan, Law and Practice* is a basic legal textbook on workers' compensation in Michigan. Although it is written for attorneys, it is not written in legalese. Many workers' compensation managers who are not attorneys find this book very helpful. It is published by the Institute of Continuing Legal Education in Ann Arbor. For more information or to order your copy, call ICLE at (313) 764-0533.

\* For more information about these publications or to order, call M. Lee Smith Publishers LLC at 1-800-274-6774.

### Seminars and Conferences:

Ed Welch has designed numerous seminars and conferences that are presented by Michigan State University. Most of these are seminars at which attendance is limited to about 30 people. This guarantees that there will be an open discussion with the seminar leader and among participants. For more information about these, contact the Michigan State University Human Resources Education and Training Center at 517-355-9591.

**Some Workers Don't File**

*(continued from page 1)*

with the individuals and match all of the above information with information from the Bureau of Workers' Disability Compensation database. We

hope also to match it with other records which would confirm their earnings.)

**Time Off**

If we took a group of individuals, all of whom had been reported

by their company doctor as having a known or suspected occupational disease, what percentage do you expect would at least have taken some time away from work? The surprising result was that only about 38 percent of these individuals missed one or more days of work.

Figure 1 divides the workers who answered this question according to the number of days they were away from work as a result of their occupational disease. As can be seen, 972 of the injured workers surveyed, or 62 percent, missed no time from work.

**Who Claimed Comp?**

During the interview, we asked each worker, "Have you filed a workers' compensation claim as a result of the injury?"<sup>2</sup> Only 25 percent of the workers said yes. See Figure 2.

Michigan law requires an individual to be away from work for seven days before he or she is entitled to wage loss benefits. As indicated above, only a portion of the workers missed that much time. Nevertheless, we would have expected the individuals who did not lose time to have filed claims for workers' compensation benefits to cover their medical costs.

If we look only at workers who told us that they missed seven consecutive days, the filing percentage is much higher. However, we still find that 23 percent of the individuals did not file a claim for workers' compensation benefits. See Figure 3.

**Discussion**

These results are quite surprising. Almost 23 percent of the workers who seemed clearly entitled to benefits did not file a claim, and 75 percent of the people who seemed to be entitled to at least medical benefits under workers' compensation did not file. Of course this does not prove that all claims that are filed are valid, but it does cast a great deal of doubt on the assumption that everyone with a valid claim files.

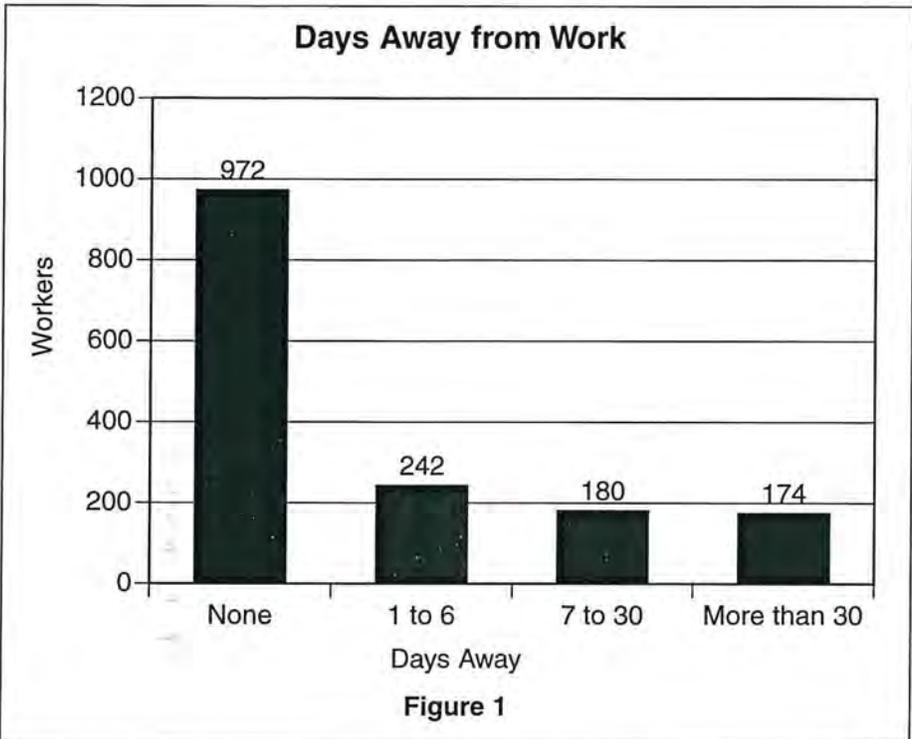


Figure 1

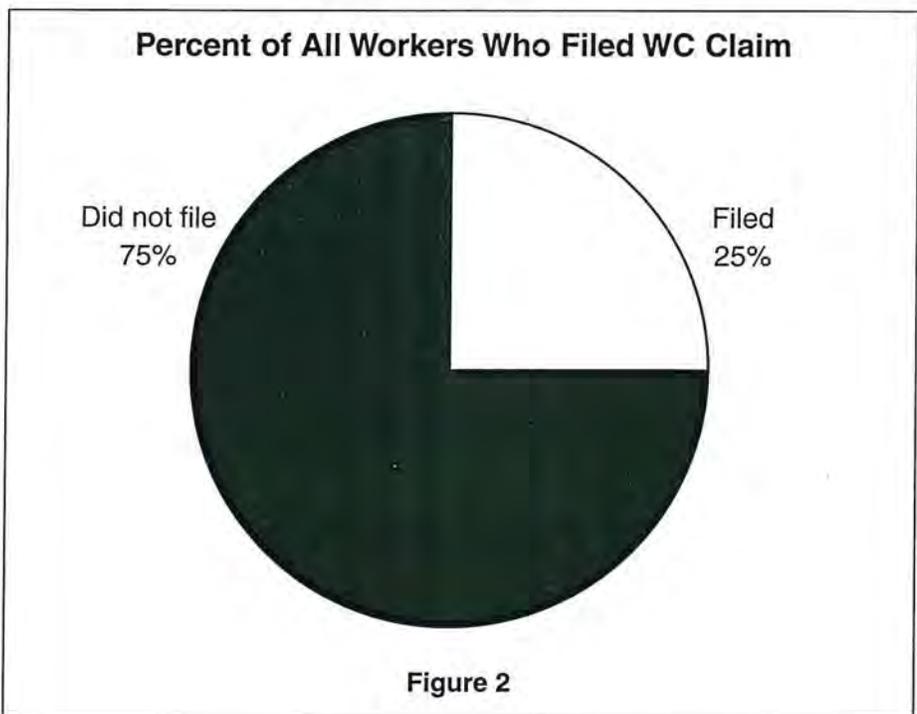


Figure 2

These findings also raise questions about the assumption that everyone who can take time away from work does so. It would appear that a great many people are "toughing it out" or "working through their injury."

It is also possible that some of this results from good claims management by employers. Perhaps they are encouraging very early reporting of repetitive trauma difficulties and providing individuals with such dif-

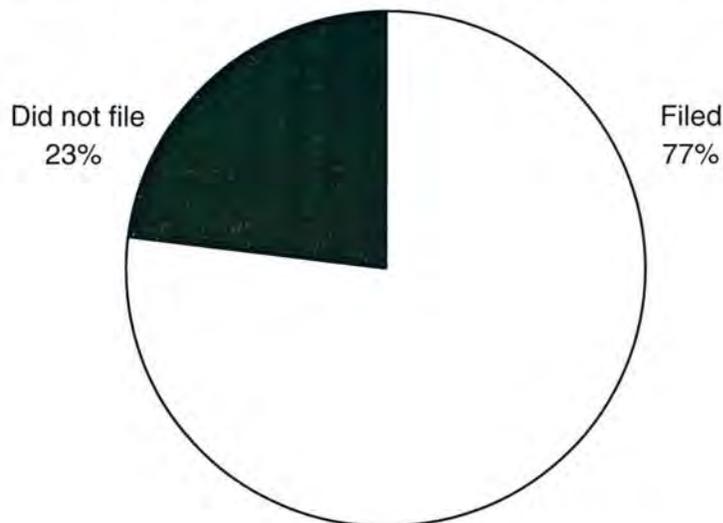
ficulties with appropriate preventive health care and job modifications. We would hope that this might be one of the explanations of why so few people lost time from work.

As we progress with the project, gather more data, and further analyze the data we have, we will attempt to find explanations for these results. We will be reporting them in future issues of *On Workers' Compensation* and in other journals.

## Researchers

The researchers involved in this project include Jeff Biddle, Ph.D., Department of Economics; Joseph Gardiner, Ph.D., College of Human Medicine; Andrew Hogan, Ph.D., College of Human Medicine; Mary Jo Reilly, M.S., College of Human Medicine; Karen Roberts, Ph.D., School of Labor and Industrial Relations; Kenneth Rosenman, M.D., College of Human Medicine; Qiuyun (Jenny) Wang, M.S., College of Human Medicine; and Edward M. Welch, J.D., School of Labor and Industrial Relations; all at Michigan State University.

**Percent of Workers Off 7 Days Who Filed WC Claims**



**Figure 3**

1. In a population of workers' compensation cases, one would expect the back injuries to be much more frequent than disabilities for the upper extremities. Our study, however, was limited to people who were reported as having an *occupational disease*. Back injuries are more often seen as the result of a single injury. This population included only individuals with back injuries that were considered to be an occupational disease. For this reason the number of back cases was relatively small.
2. In a later stage of the study, we will compare our database with the Bureau of Workers' Disability Compensation and be able to confirm who actually received benefits. At this point we must rely on each worker's self-report of having filed a claim. 

## Reform Stopped

### Ohio Voters Reject Amendments

Earlier this year the Ohio Legislature enacted amendments to its workers' compensation law that were seen by many as extremely restrictive. The Ohio AFL-CIO launched a petition drive and put the issue on the ballot. As we go to press, we have learned that on November 4, 1997, Ohio voters repealed the reform amendments by a 57-43 percent vote.

 ON WC



## **Appendix III**

MICHIGAN STATE UNIVERSITY

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**MANAGING DISABILITY COST:  
EMPLOYER SURVEY I**

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All responses to this questionnaire will be kept strictly confidential. Upon completing the survey, please either fax it to the attention of Karen Roberts at 517-432-3606 or return it by mail to:

**Professor Karen Roberts  
School of Labor and Industrial Relations  
412 S. Kedzie  
Michigan State University  
East Lansing, MI 48824**

You indicate your voluntary consent to participate by completing and returning the questionnaire.

**Section A: Background Information**

A1. Please verify the name and address of your facility:

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

First, we would like to ask you to provide some basic information about your facility.

A2. What is the main product produced or service provided at this facility?

\_\_\_\_\_

**Section B: Workforce**

The following questions refer to the status of your facility.

B1. Is there more than one shift at your facility?

Yes. . . . . 1  
No . . . . . 2

*If No, please skip to B3.*

B2. In January, 1996, what percent of the production workforce would you estimate worked rotating shifts?

- 1 = None
- 2 = Almost none (1-20%)
- 3 = Some (21-40%)
- 4 = About half (41-60%)
- 5 = Most (61-80%)
- 6 = Almost all (81-99%)
- 7 = All (100%)

B3. In January 1996, approximately what percent of your total workforce worked part-time? \_\_\_ \_\_\_ %

B4. In January 1996, approximately what percent of your production workforce worked part-time? \_\_\_ \_\_\_ \_\_\_%

B5. In January 1996, approximately what percent of your total workforce was female? \_\_\_ \_\_\_ \_\_\_%

B6. In January 1996, approximately what percent of your production/service provider workforce was female? \_\_\_ \_\_\_ \_\_\_%

B7. Has your company gone through significant downsizing in the last three years?

Yes..... 1  
No ..... 2

B8. Using a 5 point scale, where 1 is "Little or None" and 5 is "Very Great", on average, to what extent would you say your company's business environment is characterized by the following conditions:

	Little or None	Some	Moderate	Great	Very Great
a. Subject to heavy foreign competition	1	2	3	4	5
b. Rapidly growing product market	1	2	3	4	5
c. Shortening product life cycles	1	2	3	4	5
d. Declining product markets	1	2	3	4	5
e. Serious labor shortages	1	2	3	4	5

B9. From the time a **production worker** is hired into your facility, on average how many months working on the job does it take for that person to be fully trained to do their job? \_\_\_ \_\_\_ (# months)

B10. Do the **production workers** in your facility need regular formal training to keep their jobs current?

Yes. . . . . 1  
 No . . . . . 2

B11. Using a scale from 1 to 5 where 1 is "Not Important at All" and 5 is "Very Important" how important is it when filling a **production job** to give preference to someone already employed in your establishment?

Not Important at All	Not that Important	Somewhat Important	Very Important	Very Important
1	2	3	4	5

B12. Using the same scale from 1 to 5 where 1 is "Not Important at All" and 5 is "Very Important", how important is it when you do fill a **production job** with someone already employed at your workplace to use seniority in deciding who gets the job?

Not Important at All	Not that Important	Somewhat Important	Very Important	Very Important
1	2	3	4	5

B13. When you think about the pay rates for **production workers**, how do you think your establishment compares with those employing workers in comparable occupations in the same industry and in the same geographical area?

Far Below	Somewhat Below	About the Same	Somewhat Above	Way Above
1	2	3	4	5

## Section C: General Business Practices

Now we would like to ask you about some of your general business practices. First we would like to ask you about how work is organized.

- C1. What percent of the production workers at your facility are organized into formal work teams?

1 = None (0%)  
2 = Almost none (1-20%)  
3 = Some (21-40%)  
4 = About half (41-60%)  
5 = Most (61-80%)  
6 = All (100%)

- C2. In some workplaces, employees supervise their own work and make decisions about pace of work. How often would you say production workers do this at your workplace?

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

- C3. In some workplaces, employees can control the choice and ordering of tasks they do in their jobs. How often do production workers do this at your workplace?

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

- C4. Some companies have job-rotation policies where workers spend as much as six months in one division then six months in another in order to broaden their experience and skills; how often do production workers do this at your workplace?

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

Now we would like to ask you about committees in your workplace.

C5. Are there established committees made up of *both* non-managerial workers *and* managers who meet regularly to deal with problems concerning:

a. Implementation of new technology

Yes. .... 1  
No ..... 2

b. Quality Control

Yes. .... 1  
No ..... 2

c. Safety

Yes. .... 1  
No ..... 2

d. Other issues

Yes. .... 1  
No ..... 2

C6. Below is a list of four human resource issues. Please rank how important you think they are in your organization with 1 indicating the most important issue and 4 indicating the least important issue.

- \_\_\_ a. Retention of skilled employees
- \_\_\_ b. Employee training and development
- \_\_\_ c. Workplace health and safety
- \_\_\_ d. Workforce diversity and affirmative action

Next we would like to ask you about your selection and training practices.

C7. When you hire new production workers, using a 5 point scale, where 1 is "Not Important at All" and 5 is "Very Important", how important are:

a. Previous experience in a similar job.

Not Important at All	Not that Important	Somewhat Important	Important	Very Important
1	2	3	4	5

b. Apparent openness to learning.

Not Important at All	Not that Important	Somewhat Important	Important	Very Important
1	2	3	4	5

c. Interpersonal skills/ability to work with others.

Not Important at All	Not that Important	Somewhat Important	Important	Very Important
1	2	3	4	5

C8. Using a scale from 1 to 5, where 1 is Strongly Disagree and 5 is Strongly Agree, to what extent do you agree with the following statements about the production employees in your organization?

a. Extensive training programs are provided for individuals in production jobs.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

- b. **Employees in production jobs normally go through training programs every few years.**

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

- c. **New hires learn most of the skills they need by working with more senior workers.**

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

- d. **Formal training programs are regularly offered to employees in order to increase their promotability in this organization.**

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

- e. **There are readily accessible formal training programs to teach new hires the skills they need to perform their jobs.**

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

**Now we would like to ask you about the degree of employment security in your organization.**

C9. Has your organization made any explicit or implicit no lay-off pledge to its employees?

Yes..... 1  
No..... 2

C10. Using a scale from 1 to 5, where 1 is Strongly Disagree and 5 is Strongly Agree, to what extent do you think your organization's policy is consistent with the following statements:

a. An organization should accept responsibility for the economic welfare of its employees.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

b. The organization should accept responsibility for the personal and family well-being of its employees.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

#### Section D: Employee Perceptions

In this section, we want to ask you questions about how you think the employees in your facility view the climate and culture of the workplace. Using a scale from 1 to 5 where 1 is Strongly Disagree and 5 is Strongly Agree, please rate how strongly you think most production employees in your facility would agree or disagree with the following statements.

D1. Job decisions at this workplace are made in an unbiased manner.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D2. Most managers at this facility make sure that all employee concerns are heard before job decisions are made.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D3. To make job decisions, most managers collect accurate and complete information.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D4. The general manager at this facility clarifies decisions and provides additional information when requested by employees.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D5. All job decisions are applied consistently across all affected employees.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D6. Employees feel free to challenge or appeal job decisions made by their managers.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D7. When decisions are made about an employee's job, most managers treat that employee with kindness and consideration.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D8. When decisions are made about an employee's job, most managers treat that employee with respect and dignity.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D9. When decisions are made about an employee's job, most managers deal with that employee in a truthful manner.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D10. When decisions are made about an employee's job, most managers are sensitive to that employee's personal needs.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D11. When decisions are made that affect an employee's job, most managers show concern for the rights of that employee.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

D12. Most managers very clearly explain to employees decisions that may affect their jobs.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

## Section E: Employee Relations

In this section, we want to ask you about the relations between managers and employees in your workplace.

E1. Is any of your workforce represented by a union?

Yes ..... 1  
No ..... 2

*If Yes, answer questions E2 through E6.*

*If No, answer questions E7 through E12.*

Using a 5 point scale, where 1 is Never and 5 is Always, please indicate the extent to which the following statements characterize the day-to-day relationships between union(s) and management officials.

E2. Both parties show respect for the goals and objectives of the other.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E3. Union and management personnel trust each other.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E4. The union influences management decisions.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E5. When conflicts arise, negotiations between union and management take place with a spirit of cooperation.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E6. Each side shows an understanding of the other's position.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

*Please answer questions E7 through E12 if you answered No to question E1. If you answered Yes to E1, skip to section F.*

**In this section, we want to ask you about the relationship between production employees and management in your workplace.**

Using a 5 point scale, where 1 is Never and 5 is Always, please indicate the extent to which the following statements characterize the day-to-day relationships between production employees and management officials.

E7. Management shows respect for the goals and objectives of its **production workers**.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E8. Management personnel trusts the motives of its **production workers**.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E9. **Production workers** are able to influence management decisions.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E10. When conflicts arise, negotiations between management and **production workers** take place with a spirit of cooperation.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E11. Management shows an understanding of the production workforce's position.

Never	Rarely	Sometimes	Often	Always
1	2	3	4	5

E12. Are there formal procedures for resolving disputes between employees and their supervisors or co-workers?

Yes .....	1
No .....	2

**Section F: Policies and Practices**

**In this section, we want to ask you about policies and practices in your workplace directed toward safety and managing disability.**

Using a scale from 1 to 5, where 1 is Strongly Disagree and 5 is Strongly Agree, please rate the extent to which you would agree that the three following statements (Questions F1, F2, and F3) characterize the safety environment of your workplace.

F1. Upper management in this workplace has direct knowledge of the potential safety hazards in the workplace.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

F2. At this facility, funds and other necessary resources are committed to address unsafe working conditions.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

- F3. Supervisors in this workplace have established goals for safety and receive regular feedback on their performance in meeting safety goals.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

- F4. Using a scale from 1 to 5 where 1 is Not at All Important and 5 is Very Important, when you think about how supervisor performance is evaluated, how important is safety performance in a supervisor's performance appraisal.

Not at All Important	Not that Important	Somewhat Important	Important	Very Important
1	2	3	4	5

**Assuming an injury occurs, using a scale where 1 is Never and 5 is Always, please describe the extent to which the following disability-related policies and practices characterize your workplace.**

- F5. Someone capable of handling work related disability claims is accessible to employees during working hours.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

- F6. Responsibility for disability claim management and return-to-work coordination is assigned to a specific individual in the workplace.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F7. The treating physician is asked to identify worker restrictions and capacities as well as a target date for return-to-work.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F8. Our facility monitors the health status and projected return to work date for employees off work due to disability.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F9. At my facility placement options are developed and/or job duties are modified to return disabled employees to work.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F10. Our facility provides accommodations such as assistive devices and flexible work scheduling to facilitate placement of restricted workers.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F11. Follow-up contact is made with the employee and supervisor after successful return-to-work to deal with any needed adjustments.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F12. Ergonomic strategies are used to enhance safety and to improve workstation design and work flow.

Never	Occasionally	Sometimes	Usually	Always
1	2	3	4	5

F13. Using a scale from 1 to 5, where 1 is Discouraged Strongly and 5 is Encouraged Strongly, how would you rate your facility's policy in reporting work place injuries?

Discouraged Strongly . . . . .1  
 . . . . .2  
 . . . . .3  
 . . . . .4  
 Encouraged Strongly . . . . .5

F14. Using a scale from 1 to 5, (where 1 is Discouraged Strongly and 5 is Encouraged Strongly), how would you rate most line or direct supervisors' attitudes toward reporting work place injuries?

Discouraged Strongly . . . . .1  
 . . . . .2  
 . . . . .3  
 . . . . .4  
 Encouraged Strongly . . . . .5

F15. Different firms emphasize different things in forming and implementing policies to manage workers' compensation. When you think about your facility's policy toward workplace injuries, how important are each of the following in that policy?

	Not that Important	Important	Extremely Important
a. Cost containment	1	2	3
b. Safety/injury prevention	1	2	3
c. Bringing injured workers back to work	1	2	3
d. Arranging light duty or protected work jobs	1	2	3
e. Assuring injured workers are 100% before return to work	1	2	3

- |   |   |   |   |
|---|---|---|---|
| f. Assuring access to and quality of medical care for injured workers | 1 | 2 | 3 |
| g. Other (please specify)   | 1 | 2 | 3 |
- 

Thank you for taking the time to complete this survey. Please record any additional comments here:

---

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To whom should we send the final results?

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

MICHIGAN STATE UNIVERSITY

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**MANAGING DISABILITY COSTS:  
AN EMPLOYER SURVEY**

---



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All responses to this questionnaire will be kept strictly confidential. Upon completing the survey, please either fax it to the attention of Karen Roberts at 517-432-3606 or return it by mail to:

**Professor Karen Roberts  
School of Labor and Industrial Relations  
412 S. Kedzie  
Michigan State University  
East Lansing, MI 48824**

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**You indicate your voluntary consent to participate by completing and returning the questionnaire**

**SECTION A: FACILITY INFORMATION**

1. Is this facility a single-establishment organization, or does the organization operate at multiple locations?

- Single establishment . . . . . 1 -- please go to question A4
- Multiple locations . . . . . 2

A2. How many facilities or plants are in the organization? \_\_\_\_\_ facilities

A3. How many people are employed by the entire organization? \_\_\_\_\_ employees

A4. How many years has your facility been in business? \_\_\_\_\_ years

A5. Would you say that over the past 5 to 10 years your facility's sales or revenues have:

- Grown . . . . . 1
- Declined . . . . . 2
- Stayed the same . . . . . 3

**SECTION B: WORKFORCE**

The following questions refer to the status of your facility.

- B1. What was the total payroll (including overtime) for your facility for the month of January, 1996? \$ \_\_\_\_\_ total payroll
- B2. What was the total payroll (including overtime) for production workers at your facility for the month of January, 1996? \$ \_\_\_\_\_ total payroll
- B3. Excluding temporary or contract workers, what was the total number of employees at your facility in January, 1996? \_\_\_\_\_ total employees
- B4. As of January, 1996, approximately what percentage of the workforce at your facility were production workers? \_\_\_\_\_ percentage
- B5. Approximately how many new employees were hired during 1996? \_\_\_\_\_ 1996 hires
- B6. Approximately how many employees left the firm during 1996? \_\_\_\_\_ employees left

*If the answer to B6 is "None" or "Zero", please go to question B8*

B7. What percent of the employees who left were lay-offs or terminations due to business conditions? \_\_\_\_\_ %

**B8.** What is the average age of your workforce? \_\_\_\_\_ *average age*

**B9.** What would you estimate is the highest education level reached by most of the production workers?

- Less than high school degree . . . . . 1
- High school degree . . . . . 2
- Technical certificate or Associate Degree . . . . . 3
- College degree or higher . . . . . 4

**B10.** Did you use temporary or contract workers during 1996?

- Yes . . . . . 1
- No . . . . . 2 -- *please go to question B12*

**B11.** Approximately how many temporary or contract workers were employed at your facility during 1996 for:

- a. 3 months or more \_\_\_\_\_ *temporary/contract workers*
- b. Between 1 and 2 months \_\_\_\_\_ *temporary/contract workers*
- c. Under 1 month \_\_\_\_\_ *temporary/contract workers*

**B12.** Are any of the workers at your workforce represented by a union?

- Yes . . . . . 1
- No . . . . . 2 -- *please go to question B16*

**B13.** What percent of the workforce is covered by a collective bargaining agreement? \_\_\_\_\_ %

**B14.** How many unions are represented in your workforce? \_\_\_\_\_ *Number of unions*

**B15.** Approximately how many grievances were there during 1996? \_\_\_\_\_ *Number of grievances*

**B16.** What percent of the production workers in your facility are paid on the following basis:

\_\_\_\_\_ % paid an annual salary      \_\_\_\_\_ % paid an hourly wage

**SECTION C: EMPLOYEE BENEFITS**

This section deals with the benefits your facility provides to its employees. Please circle the answer that best represents what percentage of your employees are offered each benefit type.

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	All (100%)
C1. Medical or hospital insurance	1	2	3	4	5	6
C2. Dental Care benefits	1	2	3	4	5	6
C3. Life Insurance	1	2	3	4	5	6
C4. Sick leave with full pay or short-term disability	1	2	3	4	5	6
C5. Assistance in caring for elderly family members	1	2	3	4	5	6
C6. Flexible hours or flexitime scheduling	1	2	3	4	5	6
C7. Pension or retirement programs	1	2	3	4	5	6
C8. Drug or alcohol abuse programs	1	2	3	4	5	6
C9. Long term disability insurance	1	2	3	4	5	6

**SECTION D: REWARD SYSTEMS**

At your workplace, what percentage of employees are covered or eligible for a pay/reward system with each of the following elements? Please circle the answer that best represents what percentage of your employees are offered each pay/reward system. Please refer to the definitions below when necessary.

**Knowledge/skill-based pay:** An alternative to traditional job-based pay where pay levels are based on how many skills employees have or how many jobs they potentially could do.

**Gainsharing:** Compensation based on a formula that shares some part of gains in productivity, quality, cost effectiveness, or other performance indicators.

**Merit pay based on individual performance:** Compensation based in some part on individual performance appraisals.

**Work group or team incentives:** Compensation based in some part on the performance of an explicitly identified work group or team.

**Employee stock ownership plans (ESOPs):** A credit mechanism that enables employees to buy their employer's stock, thus giving them an ownership stake in the company.

**Profit-sharing:** A bonus plan that shares some portion of company profits with employees.

**Commissions or piece-work pay:** Compensation that is equal to an explicit percent of individually-generated sales or revenues or that is based on an individually produced unit of output.

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	All (100%)
D1. Knowledge/skill-based pay	1	2	3	4	5	6
D2. Gainsharing plan	1	2	3	4	5	6
D3. Merit pay based on individual performances	1	2	3	4	5	6
D4. Work group or team incentives	1	2	3	4	5	6
D5. Employee Stock Ownership Plan	1	2	3	4	5	6
D6. Profit-sharing	1	2	3	4	5	6
D7. Commissions or piece-work pay	1	2	3	4	5	6
D8. Other _____ (specify)	1	2	3	4	5	6

**SECTION E: DISABILITY MANAGEMENT**

In this section, we want to ask you about policies and practices in your workplace directed toward managing disability.

E1. What is the source of your workers' compensation insurance?

- 1. Private insurance (Name private insurance carrier \_\_\_\_\_)
- 2. Individual self-insurance of \_\_\_\_\_
- 3. Group self-insurance (Name of self-insurance group \_\_\_\_\_)
- 4. Other \_\_\_\_\_ (Please specify)

E2. During 1996, how many workers' compensation claims involving lost time from work were there at your facility?

\_\_\_\_\_ number of claims

E3. Does your facility have a safety committee?

- Yes ..... 1
- No ..... 2

E4. How often are safety audits involving supervisors, line employees, and/or senior management conducted? Choose the one that comes the closest to your organization's practice

- Once a week or more ..... 1
- More than once a month but less than every week ..... 2
- More than every six months but less than every month ..... 3
- More than once a year but less than every six months ..... 4
- Once a year ..... 5
- Less frequently than once a year ..... 6
- Never ..... 7

E5. What is your title or position at the facility?

\_\_\_\_\_ position

Thank you for your help with this important survey

## **Appendix IV**

MICHIGAN STATE UNIVERSITY

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**MANAGING DISABILITY COSTS:  
AN EMPLOYER SURVEY**

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FEEDBACK REPORT



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Prepared by:

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Thank you for participating in our study of why employees file workers' compensation claim, funded by the National Institute for Occupational Safety and Health (NIOSH). As part of this study, we surveyed 1609 individuals who had been identified by a treating physician as having a work-related chronic back, wrist/hand, or shoulder injury. We then surveyed their employers there were 57 employers in total, fifty of whom cooperated with the study. Forty of the fifty were involved in some aspect of auto manufacturing. The remainder were distributed among the food processing, mining, health services, chemical and education industries.

This report provides you with a summary of the responses we received from those fifty respondents. We have not provided the responses to all of the questions because in many cases your responses were very similar. The report is organized into four areas: work place business practices, employee perceptions of organizational procedures, the industrial relations climate, and health and safety practices.

For most of the questions, this report shows the percent of respondents who gave a particular answer to our questions (The percentages may not sum to 100% if all fifty firms did not answer the question). If the answer is in a different form, that form will be noted in brackets at the end of that question. Attached to the report is a sheet showing your answers to each question. You can find where your response fall in the distribution of responses by comparing your answer to the percent distribution for each question shown in the report.

The first section of the report addresses the business climate faced by the participating firms. We included these responses without any analysis to give you an idea of the external market circumstances faced by other Michigan firms.

## I. Business Climate

A-1. Has your company gone through significant downsizing in the last three years?

Yes-----36%

No-----62%

Unanswered ----2%

A-2. Using a 5 point scale, where 1 is "Little or None" and 5 is "Very Great", on average, to what extent would you say your company's business environment is characterized by the following conditions:

	<u>1</u> Little or None	<u>2</u> Some	<u>3</u> Moderate	<u>4</u> Great	<u>5</u> Very Great
a. Subject to heavy foreign competition	14%	8%	6%	8%	62%
b. Rapidly growing product market	42%	4%	16%	16%	20%
c. Shortening product life cycles	20%	18%	16%	42%	2%
d. Declining product markets	34%	22%	26%	14%	4%
e. Serious labor shortages	58%	24%	10%	2%	6%

## WORKPLACE BUSINESS PRACTICES

The questions about workplace business practices clustered around several areas: workplace training, self-management/governance, pay and employment security.

Training appears to be an important feature of most workplaces in the survey, although not uniformly. For example, although it takes the average new employee 2.8 months to learn their job, the range was zero months at some sites up to fifteen months in others. Despite what looks like a high level of availability of training from employees, 86% of the sites reported that new hires learn most of what they need informally from more senior workers.

Work organization and governance varies considerably across work sites. About 30% of the sites organize most or all production workers into teams. Team organization appears to be an all-or-nothing characteristics: only 2% of the sites have about one-half of their production workforce in teams. These teams do not appear to be self-managers: production workers can regulate their work pace in 26% of the sites and order their work tasks in 24%. At a higher organizational level, however, there is more worker participation in production decisions: 56% of the sites have joint labor management committees who deal with the implementation of new technology.

The most commonly used alternative incentive systems is Employee Stock Ownership Plans (ESOPs), available to most or all employees at 40% of the sites. Half or more of the sites do not use the other incentive systems we asked about: knowledge/skill-based pay, merit pay based on individual performance, or work group/team incentives. And, at those sites that do use any of these incentive schemes, it appears to be on a limited basis.

Management has made a fairly high commitment to the economic security of its workforce. Sixty-six percent of the sites have made some type of no-lay-off pledge to their employees, often as part of a collective bargaining agreement. Respondents from 56% of the sites agreed that the employer has responsibility for the economic welfare of its employees; however, a high, but smaller, 46% thought the organization should accept similar responsibility for family well-being.

## II. Workplace Business Practices

B-1. At your workplace, what percent of employees are covered by or eligible for a pay/reward system with each of the following elements?

	<u>0%</u>	<u>1-20%</u>	<u>21-40%</u>	<u>41-60%</u>	<u>61-80%</u>	<u>100%</u>
	None	Almost none	Some	About half	Most	All
a. Knowledge/skill-based pay:	50	16	8	4	6	6
b. Merit pay based on individual performance:	54	10	12	4	2	8
c. Work group or team incentives:	55	22	2	2	2	2
d. Employee Stock Ownership Plan:	44	0	4	0	2	38

B-2. From the time a production worker is hired into your facility, on average how many months working on the job does it take for that person to be fully trained to do their job? ----- **2.796**

B-3. Do the production workers in your facility need regular formal training to keep their jobs current?

Yes -----66%  
 No ----- 34%

B-4. Using a scale from 1 to 5 where 1 is "Not Important at All" and 5 is "Very Important", how important is it when you do fill a production job with someone already employed at your workplace to use seniority in deciding who gets the job?

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Not Important at all	Not that Important	Somewhat Important	Important	Very Important
8%	4%	10%	4%	68%

B-5. When you think about the pay rates for production workers, how do you think your establishment compares with those employing workers in comparable occupations in the same industry and in the same geographical area?

Far Below -----	<b>0%</b>
Somewhat Below -----	<b>0%</b>
About the Same -----	<b>46%</b>
Somewhat Above -----	<b>28%</b>
Way Above -----	<b>26%</b>

B-6. What percent of the production workers at your facility are organized into formal work teams?

<b>16%</b> -----	None
<b>34%</b> -----	Almost None
<b>14%</b> -----	Some
<b>2%</b> -----	About Half
<b>8%</b> -----	Most
<b>26%</b> -----	All

**A scale of 1 of 5 is used for questions B-7 through B-9 where:**

- 1 is Never**
- 2 is Rarely**
- 3 is Sometimes**
- 4 is Often**
- 5 is Always**

B-7. In some workplaces, employees supervise their own work and make decisions about pace of work. How often would you say production workers do this at your workplace?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
16%	28%	30%	22%	4%

B-8. In some workplaces, employees can control the choice and ordering of tasks they do in their jobs. How often do production workers do this at your workplace?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
10%	40%	26%	18%	6%

B-9. Below is a list of four human resource issues as **most** important within the organization.

- a. Retention of skilled employees ----- **10%**
- b. Employee training and development ----- **18%**
- c. Workplace health and safety ----- **72%**
- d. Workforce diversity and affirmative action – **04%**

B-10. When you hire new production workers, how important are:

	Not Important at All	Not that Important	Somewhat Important	Important	Very Important
a. Previous experience in a similar job 6%	34%	10%	22%	6%	
b. Apparent openness to learning 18%	30%	4%	6%	20%	
c. Interpersonal skills/ ability to work with others	30%	4%	8%	14%	22%

*A scale of 1 of 5 is used for questions B-11 and B-13 where:*

- 1 is Strongly disagree*
- 2 is Somewhat disagree*
- 3 is Agree nor Disagree*
- 4 is Somewhat Agree*
- 5 is Strongly Agree*

B-11. To what extent do you agree with the following statements about the production employees in your organization?

a. Extensive training programs are provided for individuals in production jobs.

- 1 ----- 6%
- 2 ----- 14%
- 3 ----- 22%
- 4 ----- 34%
- 5 ----- 22%

b. Employees in production jobs normally go through training programs every few years.

- 1 ----- 2%
- 2 ----- 18%
- 3 ----- 12%

4 ----- 30%  
5 ----- 36%

- c. New hires learn most of the skills they need by working with more senior workers.

1 ----- 1%  
2 ----- 10%  
3 ----- 10%  
4 ----- 66%  
5 ----- 20%

- d. Formal training programs are regularly offered to employees in order to increase their promotability in this organization.

1 ----- 12%  
2 ----- 26%  
3 ----- 18%  
4 ----- 26%  
5 ----- 14%

- e. There are readily accessible formal training programs to teach new hires the skills they need to perform their jobs.

1 ----- 10%  
2 ----- 20%  
3 ----- 16%  
4 ----- 26%  
5 ----- 24%

- B-12. Has your organization made any explicit or implicit no lay-off pledge to its employees?

Yes -----66%  
No -----32%

B-13. To what extent do you think your organization's policy is consistent with the following statements:

- a. An organization should accept responsibility for the economic welfare of its employees.

1 -----	8%
2 -----	14%
3 -----	20%
4 -----	40%
5 -----	16%

- b. The organization should accept responsibility for the personal and family well-being of its employees.

1 -----	4%
2 -----	14%
3 -----	34%
4 -----	34%
5 -----	12%

## EMPLOYEE PERCEPTIONS OF ORGANIZATIONAL PRACTICES

The questions about employee perceptions of organizational practices cluster around two types of fairness, what are referred to as organizational fairness and interactional fairness. Organizational fairness refers to the fairness with which the organization's policies and procedures are made and implemented. Interactional fairness refers to the extent to which managers treat their employees with dignity and respect when conveying information that may affect their jobs. An important aspect about these responses is that the questions asked managers to assess their *employees'* perceptions of these fairness items, *not* the perceptions of the managers themselves.

The responses to the questions addressing organizational fairness fall into two categories. Almost all of the respondents think that employees feel free to challenge decisions or to ask for clarification of decisions. However, the responses are fairly evenly split between agree and disagree (with about 20% neither agreeing nor disagreeing) on questions related to employee perceptions of unbiasedness of decisions, the degree to which employee concerns are heard, and the consistency with which decisions are applied. This suggests that slightly fewer than half the managers think their employees view the organization's procedures as fair and about the same number think employees view the organization's procedures as unfair.

Most managers think that their employees believe that managers and supervisors treat them with respect and dignity in their personal interactions. The only exception is that fewer than half expect employees to answer that their managers are sensitive to their personal needs when making decisions about their jobs.

### III. Employee Perceptions

A scale of 1 of 5 is used for questions C-1 through C-12 where:

- 1 is Strongly disagree
- 2 is Somewhat disagree
- 3 is Agree nor Disagree
- 4 is Somewhat Agree
- 5 is Strongly Agree

Please rate how strongly you think most production employees in your facility would agree or disagree with the following statements.

C-1. Job decisions at this workplace are made in an unbiased manner.

1 -----	8%
2 -----	30%
3 -----	20%
4 -----	30%
5 -----	12%

C-2. Most managers at this facility make sure that all employee concerns are heard before job decisions are made.

1 -----	6%
2 -----	40%
3 -----	24%
4 -----	22%
5 -----	8%

C-3. To make job decisions, most managers collect accurate and complete information.

1 -----	8%
2 -----	20%
3 -----	20%
4 -----	40%
5 -----	12%

C-4. The general manager at this facility clarifies decisions and provides additional information when requested by employees.

1 ----- 2%  
2 ----- 10%  
3 ----- 6%  
4 ----- 56%  
5 ----- 26%

C-5. All job decisions are applied consistently across all affected employees.

1 ----- 8%  
2 ----- 30%  
3 ----- 22%  
4 ----- 22%  
5 ----- 18%

C-6. Employees feel free to challenge or appeal job decisions made by their managers.

1 ----- 2%  
2 ----- 8%  
3 ----- 20%  
4 ----- 44%  
5 ----- 26%

C-7. When decisions are made about an employee's job, most managers treat that employee with kindness and consideration.

1 ----- 2%  
2 ----- 26%  
3 ----- 20%  
4 ----- 42%  
5 ----- 10%

C-8. When decisions are made about an employee's job, most managers treat that employee with respect and dignity.

1 ----- 2%  
2 ----- 8%  
3 ----- 12%  
4 ----- 64%  
5 ----- 14%

C-9. When decisions are made about an employee's job, most managers deal with that employee in a truthful manner.

1 ----- 4%  
2 ----- 8%  
3 ----- 20%  
4 ----- 50%  
5 ----- 18%

C-10. When decisions are made about an employee's job, most managers are sensitive to that employee's personal needs.

1 ----- 4%  
2 ----- 22%  
3 ----- 24%  
4 ----- 44%  
5 ----- 3%

C-11. When decisions are made that affect an employee's job, most managers show concern for the rights of that employee.

1 ----- 0%  
2 ----- 8%  
3 ----- 18%  
4 ----- 52%  
5 ----- 22%

C-12. Most managers very clearly explain to employees decisions that may affect their jobs.

1 ----- 6%  
2 ----- 22%  
3 ----- 18%  
4 ----- 46%  
5 ----- 8%

## INDUSTRIAL RELATIONS CLIMATE

There were five questions about the relationship between unions and management at the worksite. About half of the managers characterized the relationship in positive terms, responding that both parties “often” or “always” showed respect for one another’s goals, trusted each other, negotiated in a spirit of cooperation, and showed an understanding of each other’s position. Further more than half felt that the union often or always influenced management decisions.

The other half of the respondents were far more likely to view the industrial relations climate as neutral rather than negative. While 14% felt that cooperation was present in negotiations rarely or never and 12% felt that union and management rarely or never trust one another, 10% or fewer evaluated the industrial relations climate in negative terms on the other three dimensions.

#### IV. Employee Relations

A scale of 1 of 5 is used for questions D-1 through D-5 where:

- 1 is never
- 2 is rarely
- 3 is sometimes
- 4 is often
- 5 is always

Please indicate the extent to which the following statements characterize the day-to-day relationships between union(s) and management officials.

D-1. Both parties show respect for the goals and objectives of the other.

1 -----	0%
2 -----	6%
3 -----	34%
4 -----	36%
5 -----	16%

D-2. Union and management personnel trust each other.

1 -----	2%
2 -----	10%
3 -----	36%
4 -----	40%
5 -----	4%

D-3. The union influences management decisions.

1 -----	0%
2 -----	4%
3 -----	34%
4 -----	48%
5 -----	6%

D-4. When conflicts arise, negotiations between union and management take place with a spirit of cooperation.

1 -----	2%
2 -----	12%
3 -----	30%
4 -----	42%
5 -----	6%

D-5. Each side shows an understanding of the others position.

1 -----	0%
2 -----	10%
3 -----	30%
4 -----	42%
5 -----	10%

## HEALTH AND SAFETY PRACTICES

The health and safety questions were divided into three categories: safety practices, practices once an injury has occurred, and workers' compensation management priorities. Safety appears to be a high priority in most of the worksites in the survey. Over two-thirds of the managers reported that safety was part of the evaluation criteria for supervisors and that upper management was knowledgeable about what safety hazards did exist in the workplace. Further, at two-thirds of the worksites, safety audits are regularly conducted at least once a month.

Nearly all of the worksites respond rapidly to injuries, with 78% having someone able to handle a claim on site most of the time and 96% reporting that supervisors encourage injury reporting. Most of the worksites have active return-to-work programs where accommodations are made and ergonomic adjustments are made. Perhaps the weakest aspect of the post-injury programs is in the follow-up: only 60% reported that follow up of accommodated employees occurs usually or always.

As might be expected, all but 6% of the respondents noted that cost containment was important or very important to their workers' compensation policies. Clearly the use of light-duty jobs or protected work is an important component: only 2% of the respondents reported that these sorts of jobs were not that important to their workers' compensation strategy. The dedication of the past to having workers be 100% before coming back to work appears to be waning: 26% reported that it was not that important, and only 28% reported that it was extremely important.

Your Responses to the Michigan State Health & Safety Survey					
Question Number	Your Response			Question Number	Your Response
A-1	2			B-13a	4
A-2a	5			B-13b	4
A-2b	5			C-1	2
A-2c	2			C-2	2
A-2d	4			C-3	2
A-2e	1			C-4	4
B-1a	3			C-5	2
B-1b	1			C-6	4
B-1c	2			C-7	2
B-1d	6			C-8	3
B-2	1			C-9	3
B-3	2			C-10	3
B-4	5			C-11	3
B-5	4			C-12	4
B-6	3			D-1	4
B-7	2			D-2	4
B-8	1			D-3	3
B-9a	2			D-4	4
B-9b	3			D-5	4
B-9c	1			E-1	2
B-9d	4			E-2a	2
B-10a	6			E-2b	4
B-10b	6			E-2c	4
B-10c	6			E-3a	3
B-11a	2			E-3b	3
B-11b	2			E-3c	3
B-11c	4			E-3d	3
B-11d	3			E-3e	4
B-11e	4			E-3f	4
B-12	1				

**V. Health & Safety Practices**

E-1. How often are safety audits involving supervisors, line employees, and/or senior management conducted? Choose the one that comes closest to your organization's practice.

- Once a week or more ----- 48%
- More than once a month but less than every week ----- 28%
- More than every six months but less than every month ----- 8%
- More than once a year but less than every six month ----- 2%
- Once a year -----8%

*A scale of 1 of 5 is used for question E-2 where:*

- 1 is Strongly disagree*
- 2 is Somewhat disagree*
- 3 is Agree nor Disagree*
- 4 is Somewhat Agree*
- 5 Is Strongly Agree*

E-2. Please rate the extent to which you would agree that the three following statements characterize the safety environment of your workplace.

a. Upper management in this workplace has direct knowledge of the potential safety hazards in the workplace.

- 1 ----- 22%
- 3 ----- 16%
- 5 ----- 60%

b. Supervisors in this workplace have established goals for safety and receive regular feedback on their performance in meeting safety goals.

- 1 ----- 2%
- 2 ----- 14%
- 3 ----- 10%

4 ----- 24%  
5 ----- 50%

- c. Using a scale from 1 to 5, when you think about how supervisor performance is evaluated, how important is safety performance in a supervisor's performance appraisal.

*1 is not at all important*  
*2 is not that important*  
*3 is important*  
*4 is somewhat important*  
*5 is very important*

1 ----- 4%  
2 ----- 10%  
3 ----- 18%  
4 ----- 18%  
5 ----- 50%

- E-3. Assuming an injury occurs, using a scale from 1 to 5, please describe the extent to which the following disability-related policies and practices characterize your workplace.

*Where:*

*1 is never*  
*2 is occasionally*  
*3 is sometimes*  
*4 is usually*  
*5 is always*

- a. Someone capable of handling work related disability claims is accessible to employees during working hours.

0

3 ----- 20%  
4 ----- 14%  
5 ----- 64%

- b. At my facility placement options are developed and/or job duties are modified to return disabled employees to work.

2 ----- 2%

3 ----- **16%**  
 4 ----- **36%**  
 5 ----- **46%**

- c. Our facility provides accommodations such as assistive devices and flexible work scheduling to facilitate placement of restricted workers.

1 ----- **2%**  
 2 ----- **12%**  
 3 ----- **18%**  
 4 ----- **34%**  
 5 ----- **34%**

- d. Follow-up contact is made with the employee and supervisor after successful return-to-work to deal with any needed adjustments.

1 ----- **0%**  
 2 ----- **12%**  
 3 ----- **28%**  
 4 ----- **28%**  
 5 ----- **32%**

- e. Ergonomic strategies are used to enhance safety and to improve workstation design and workflow.

1 ----- **2%**  
 2 ----- **2%**  
 3 ----- **10%**  
 4 ----- **36%**  
 5 ----- **50%**

- e. Using a scale from 1 to 3, where:

1 is neither  
 2 is encouraged  
 3 is encouraged strongly

How would you rate most line or direct supervisors' attitudes toward reporting work place injuries?

1 ----- 4%  
2 ----- 30%  
3 ----- 66%

# **Appendix V**

# 2ND WAVE - WJC STUDY

>U1< [loc 0/600]Before we begin, let me tell you that this interview is completely voluntary. All your responses will be kept strictly confidential. Should we come to any question that you do not want to answer, just let me know, and we will go onto the next question.

type <g> to proceed with interview ==>

>ID1< [allow 5][loc 13/1][store csid in ID1]

>R1< [allow 1][preset <1>]

>H1< I'd like to start this interview by asking you some general questions about your health.

In general, would you say your health is excellent, very good, good, fair or poor?

- <1> EXCELLENT
- <2> VERY GOOD
- <3> GOOD
- <4> FAIR
- <5> POOR

<8> DO NOT KNOW

<9> REFUSED

==>

>H17< Next I am going to read you some statements that have been used to describe people's health. Please tell me if each is definitely false, mostly false, mostly true or, definitely true for you.

I am somewhat ill.

[r]THE CODE '3' IS USED DON'T KNOW, IT IS ALSO THE MID POINT OF THE SCALE. MANY TIMES RESEARCHERS THROW OUT MID POINTS OR CODE THEM AS DON'T KNOWS, DOING IT THIS WAY SAVES THE RESEARCHER RECODING THEM[n]

- <1> DEFINITELY FALSE
- <2> MOSTLY FALSE
- <4> MOSTLY TRUE
- <5> DEFINITELY TRUE

<3> DO NOT KNOW

<9> REFUSED

==>

>H18< I am as healthy as anybody I know.

(Is this definitely false, mostly false, mostly [u]true[n], or definately true for you?)

- <1> DEFINITELY FALSE
- <2> MOSTLY FALSE
- <4> MOSTLY TRUE
- <5> DEFINITELY TRUE

<3> DO NOT KNOW  
<9> REFUSED  
===>

>H19< My health is excellent.

(Is this definitely false, mostly false, mostly [u]true[n], or  
definitely true for you?)

<1> DEFINITELY FALSE  
<2> MOSTLY FALSE  
<4> MOSTLY TRUE  
<5> DEFINITELY TRUE

<3> DO NOT KNOW  
<9> REFUSED  
===>

>H20< I have been feeling bad lately.

(Is this definitely false, mostly false, mostly [u]true[n], or  
definitely true for you?)

<1> DEFINITELY FALSE  
<2> MOSTLY FALSE  
<4> MOSTLY TRUE  
<5> DEFINITELY TRUE

<3> DO NOT KNOW  
<9> REFUSED  
===>

>H2< Next, I would like to ask you some questions about limitations you may  
have due to health reasons.

Would you say your health has limited you in doing vigorous activities  
such as running, lifting heavy objects, or participating in strenuous  
sports for more than 3 months, for 3 months or less, or not at all?

<1> LIMITED FOR MORE THAN 3 MONTHS  
<2> LIMITED FOR 3 MONTHS OR LESS  
<3> NOT LIMITED AT ALL

<8> DO NOT KNOW  
<9> REFUSED  
===>

>H3< Would you say your health has limited you in doing moderate activities  
such as moving a table, carrying groceries, or bowling for more than  
3 months, for 3 months or less, or not at all?

<1> LIMITED FOR MORE THAN 3 MONTHS  
<2> LIMITED FOR 3 MONTHS OR LESS  
<3> NOT LIMITED AT ALL

<8> DO NOT KNOW  
<9> REFUSED  
===>

>H4< (Would you say your health has limited you in . . . .)

walking uphill or climbing a few flights of stairs

(for more than 3 months, for 3 months or less, or not at all)?

<1> LIMITED FOR MORE THAN 3 MONTHS

<2> LIMITED FOR 3 MONTHS OR LESS

<3> NOT LIMITED AT ALL

<8> DO NOT KNOW

<9> REFUSED

====>

>H5< (Would you say your health has limited you in . . . .)

bending, lifting, or stooping

(for more than 3 months, for 3 months or less, or not at all)

<1> LIMITED FOR MORE THAN 3 MONTHS

<2> LIMITED FOR 3 MONTHS OR LESS

<3> NOT LIMITED AT ALL

<8> DO NOT KNOW

<9> REFUSED

====>

>H6< (Would you say your health has limited you in . . . .)

walking one block

(for more than 3 months, for 3 months or less, or not at all)?

<1> LIMITED FOR MORE THAN 3 MONTHS

<2> LIMITED FOR 3 MONTHS OR LESS

<3> NOT LIMITED AT ALL

<8> DO NOT KNOW

<9> REFUSED

====>

>H7< (Would you say your health has limited you in . . . .)

eating, dressing, bathing, or using the toilet

(for more than 3 months, for 3 months or less, or not at all)?

<1> LIMITED FOR MORE THAN 3 MONTHS

<2> LIMITED FOR 3 MONTHS OR LESS

<3> NOT LIMITED AT ALL

<8> DO NOT KNOW

<9> REFUSED

====>

>H8< Would you say your health kept you from working at a job,  
doing work around the house or going to school for  
more than 3 months, for 3 months or less, or not at all?

- <1> LIMITED FOR MORE THAN 3 MONTHS
- <2> LIMITED FOR 3 MONTHS OR LESS
- <3> NOT LIMITED AT ALL

- <8> DO NOT KNOW
- <9> REFUSED

===>

>H9< Have you been unable to do certain kinds or amounts of work, housework, or schoolwork because of your health for more than 3 months, for 3 months or less, or not at all?

- <1> LIMITED FOR MORE THAN 3 MONTHS
- <2> LIMITED FOR 3 MONTHS OR LESS
- <3> NOT LIMITED AT ALL

- <8> DO NOT KNOW
- <9> REFUSED

===>

>H10< How much bodily pain have you had during the past four weeks?

Would you say no pain, very mild, mild, moderate, severe or very severe pain?

- <0> NO PAIN
- <1> VERY MILD
- <2> MILD
- <3> MODERATE
- <4> SEVERE
- <5> VERY SEVERE

- <8> DO NOT KNOW
- <9> REFUSED

===>

>H11< In the past month, how much of the time has your health limited your social activities such as visiting with friends or close relatives?

Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time?

- <1> ALL OF THE TIME
- <2> MOST OF THE TIME
- <3> A GOOD BIT OF THE TIME
- <4> SOME OF THE TIME
- <5> A LITTLE OF THE TIME
- <6> NONE OF THE TIME

- <8> DO NOT KNOW
- <9> REFUSED

===>

>H12< These next questions focus on your emotional or mental health over the past month.

In the past month how much of the time have you been very nervous or anxious?

(Would you say all of the time, most of the time, a good bit of the

time, some of the time, a little of the time, or none of the time)?

- <1> ALL OF THE TIME
- <2> MOST OF THE TIME
- <3> A GOOD BIT OF THE TIME
- <4> SOME OF THE TIME
- <5> A LITTLE OF THE TIME
- <6> NONE OF THE TIME
  
- <8> DO NOT KNOW
- <9> REFUSED ==>

>H13< In the past month how much of the time have you felt calm and peaceful?

(Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time)?

- <1> ALL OF THE TIME
- <2> MOST OF THE TIME
- <3> A GOOD BIT OF THE TIME
- <4> SOME OF THE TIME
- <5> A LITTLE OF THE TIME
- <6> NONE OF THE TIME
  
- <8> DO NOT KNOW
- <9> REFUSED ==>

>H14< In the past month how much of the time have you felt down-hearted or blue?

(Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time)?

- <1> ALL OF THE TIME
- <2> MOST OF THE TIME
- <3> A GOOD BIT OF THE TIME
- <4> SOME OF THE TIME
- <5> A LITTLE OF THE TIME
- <6> NONE OF THE TIME
  
- <8> DO NOT KNOW
- <9> REFUSED ==>

>H15< In the past month how much of the time have you been a happy person?

(Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time)?

- <1> ALL OF THE TIME
- <2> MOST OF THE TIME
- <3> A GOOD BIT OF THE TIME
- <4> SOME OF THE TIME
- <5> A LITTLE OF THE TIME
- <6> NONE OF THE TIME
  
- <8> DO NOT KNOW

<9> REFUSED ===>

>H16< In the past month how often have you felt so down in the dumps that nothing could cheer you up?

(Would you say all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time?)

- <1> ALL OF THE TIME
- <2> MOST OF THE TIME
- <3> A GOOD BIT OF THE TIME
- <4> SOME OF THE TIME
- <5> A LITTLE OF THE TIME
- <6> NONE OF THE TIME

<8> DO NOT KNOW  
<9> REFUSED ===>

>MM1< For the next set of questions, please tell me if you have had any of the following problems [u]nearly every day[n] for the [u]past [n] [u]two weeks[n].

Trouble falling asleep or sleeping too much?

- <1> YES
  - <5> NO
  - <8> DO NOT KNOW
  - <9> REFUSED
- ===>

>MM2< Feeling tired or having little energy?

(Have you had this problem nearly every day for the past two weeks)?

- <1> YES
  - <5> NO
  - <8> DO NOT KNOW
  - <9> REFUSED
- ===>

>MM3< A poor appetite or over-eating?

(Have you had this problem nearly every day for the past two weeks)?

- <1> YES
  - <5> NO
  - <8> DO NOT KNOW
  - <9> REFUSED
- ===>

>MM4< Little interest or pleasure in doing things?

(Have you had this problem nearly every day for the past two weeks)?

- <1> YES
- <5> NO
- <8> DO NOT KNOW

<9> REFUSED  
====>

>MM5< Feeling down, depressed or hopeless?

(Have you had this problem nearly every day for the past two weeks)?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
====>

>MM6< Feeling bad about yourself -- or feeling that you are a failure  
or feeling that you have let yourself or your family down?

(Have you had this problem nearly every day for the past two weeks)?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
====>

>MM7< Trouble concentrating on things, such as reading the newspaper  
or watching television?

(Have you had this problem nearly every day for the past two weeks)?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
====>

>MM8< Being so fidgety or restless that you were moving around a lot  
more than usual?

(Have you had this problem nearly every day for the past two weeks)?

<1> YES[goto MM10]  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED[goto MM10]  
====>

>MM9< What about the opposite, moving or speaking so slowly that other  
people could have noticed?

(Have you had this problem nearly every day for the past two weeks)?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
====>

>MM10< In the last two week, have you had thoughts that you would  
be better off dead or of hurting yourself in some way?

(Have you had this problem nearly every day for the past two weeks)?

<1> YES

<5> NO[goto A4b]

<8> DO NOT KNOW[goto A4b]

<9> REFUSED[goto A4b]

====>

>MM11< Could you tell me in more detail what you have been thinking?  
[allow 2]

====>[specify]

>A4b< The next series of questions focuses on the [fill pain]  
injury you reported in [fill mnth] that we last spoke to you  
about in [fill imth] (on [fill date]).

When did you most recently experience pain in your [fill pain]?

(Was it within the last month, more that one month ago but less  
than three months ago, more that three months ago, but less than  
six months ago, or six months to a year ago?)

<0> WITHIN THE LAST MONTH

<1> MORE THAN ONE MONTH BUT LESS THAN THREE MONTHS AGO

<2> MORE THAN THREE MONTHS BUT LESS THAN SIX MONTHS AGO

<3> MORE THAN SIX MONTHS AGO BUT LESS THAN ONE YEAR AGO

<4> OTHER

<8> DO NOT KNOW

<9> REFUSED

====>

>inj< [if injr eq <1>][goto B1][endif] back or neck pain or leg pain people  
[if injr eq <2>][goto W1][endif] wrist injury people  
[if injr eq <3>][goto S1][endif] shoulder injury people

>B1< I am now going to read some sentences that may describe people when  
they have a back or neck problem or leg pain. When I read them, you  
may find that some stand out because they describe you and your  
behavior today because of your back or neck problem or leg pain.

As I read the list, think of yourself today. When I read a sentence  
that currently describes you, please respond by saying yes.  
If the sentence does not currently describe you, please respond  
by saying no.

Because of my back or neck problem, I change positions frequently to try and get my  
back comfortable.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B2< I stay at home most of the time because of my back or neck problem.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B3< I walk more slowly than usual because of my back or neck problem.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B4< (Because of my back or neck problem), I am not doing any of the jobs that I usually do around the house.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B5< (Because of my back or neck problem), I use a railing to get upstairs.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B6< (Because of my back or neck problem), I have to hold on to something to get out of an easy chair.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

==>

>B7< I get dressed more slowly than usual (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

==>

>B8< I only stand for short periods of time (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

==>

>B9< I try not to bend or kneel down (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

==>

>B10< (Because of my back or neck problem), I find it difficult to turn over in bed.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

==>

>B11< My back or neck is painful almost all of the time.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

==>

>B12< (Because of my back or neck problem), I find it difficult to

get out of chairs.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

====>

>B13< (Because of my back or neck problem), I have trouble putting on my socks or stockings.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

====>

>B14< I only walk short distances (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

====>

>B15< I sleep less well (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

====>

>B16< I avoid heavy jobs around the house (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

====>

>B17< (Because of my back or neck problem), I am more irritable and bad tempered with other people than usual.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B18< (Because of my back or neck problem), I go upstairs more slowly than usual.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B19< (Because of my back or neck problem), I stay in bed most of the time.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B20< (Because of my back or neck problem), I try to get other people to do things for me.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B21< (Because of my back or neck problem), I lay down and rest more often.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B22< My appetite is not very good (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B23< (Because of my back or neck problem), I get dressed with help from someone else.

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B24< I sit down most of the day (because of my back or neck problem).

<1> YES

<5> NO

<3> NOT APPLICABLE

<8> DO NOT KNOW

<9> REFUSED

===>

>B25< Since we talked to you in [fill mnth] have you had surgery for your back or neck injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>B28< Since we talked to you in [fill mnth] have you been hospitalized for your back or neck injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>B29< Since we talked to you in [fill mnth] have you had x-rays or an MRI taken because of your back or neck injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>[goto P0]

>W1< I am now going to read some sentences that may describe people when they have wrist or hand pain. These statements refer to your symptoms for a typical 24-hour period during the past two weeks.

How severe, if at all, is the hand or wrist pain that you have at [u]night[n]?

Would you say it is mild pain, moderate pain, severe pain, or very severe pain?

<1> I DO NOT HAVE HAND OR WRIST PAIN AT NIGHT

<2> MILD PAIN

<3> MODERATE PAIN

<4> SEVERE PAIN

<5> VERY SEVERE PAIN

<8> DO NOT KNOW

<9> REFUSED

====>

>f11< [if W1 eq <1>] [store <1> in W2] [goto W3] [endif]

[if W1 eq <8>] [store <8> in W2] [goto W3] [endif]

[if W1 eq <9>] [store <9> in W2] [goto W3] [endif]

>W2< How often did hand or wrist pain wake you during a typical night in the past two weeks?

<1> NEVER

<2> ONCE

<3> 2-3 TIMES

<4> 4-5 TIMES

<5> MORE THAN 5 TIMES

<8> DO NOT KNOW

<9> REFUSED

====>

>W3< How severe, if at all, is the hand or wrist pain that you have during the [u]day time[n]?

(Would you say it is mild pain, moderate pain, severe pain, or very severe pain)?

<1> I DO NOT HAVE HAND OR WRIST PAIN DURING THE DAY

<2> MILD PAIN

<3> MODERATE PAIN

<4> SEVERE PAIN

<5> VERY SEVERE PAIN

<8> DO NOT KNOW

<9> REFUSED

====>

>f12< [if W3 eq <1>] [store <1> in W4] [store <1> in W5] [goto W6] [endif]

[if W3 eq <8>] [store <8> in W4] [store <8> in W5] [goto W6] [endif]

[if W3 eq <9>] [store <9> in W4] [store <9> in W5] [goto W6] [endif]

>W4< How often do you have hand or wrist pain during the [u]daytime[n]?

<1> NEVER  
<2> 1-2 TIMES DAILY  
<3> 3-5 TIMES DAILY  
<4> MORE THAN 5 TIMES DAILY  
<5> CONSTANTLY

<8> DO NOT KNOW  
<9> REFUSED

====>

>f12a< [if W4 eq <1>] [store <1> in W5] [goto W6] [endif]  
[if W4 eq <5>] [store <5> in W5] [goto W6] [endif]

>W5< How long on average does an episode of pain last during  
the daytime? Would you say less than 10 minutes, 10 minutes to  
an hour, more than 1 hour, or constant throughout the day?

<1> I NEVER GET PAIN DURING THE DAY  
<2> LESS 10 MINUTES  
<3> 10-60 MINUTES  
<4> MORE THAN 60 MINUTES  
<5> CONSTANT THROUGHOUT THE DAY

<8> DO NOT KNOW  
<9> REFUSED

====>

>W6< Do you have numbness or loss of sensation in your wrist or hand?

<1> YES  
<5> NO

<8> DO NOT KNOW  
<9> REFUSED-NO ANSWER

====>

>f13< [if W6 eq <5>] [store <1> in W6a] [goto W7] [endif]  
[if W6 eq <8>] [store <8> in W6a] [goto W7] [endif]  
[if W6 eq <9>] [store <9> in W6a] [goto W7] [endif]

>W6a< How severe is the numbness or loss of sensation in your wrist or hand?  
(Would you say it is mild, moderate, severe, or very severe?)

<1> NO NUMBNESS  
<2> MILD NUMBNESS  
<3> MODERATE NUMBNESS  
<4> SEVERE NUMBNESS  
<5> VERY SEVERE NUMBNESS

<8> DO NOT KNOW  
<9> REFUSED

====>

>W7< Do you have [u]weakness[n] in you hand or wrist?

<1> YES  
<5> NO

<8> DO NOT KNOW  
<9> REFUSED-NO ANSWER

===>

```
>f14<  [if W7 eq <5>] [store <1> in W7a] [goto W8] [endif]
        [if W7 eq <8>] [store <8> in W7a] [goto W8] [endif]
        [if W7 eq <9>] [store <9> in W7a] [goto W8] [endif]
```

>W7a< How severe is the weakness in your wrist or hand? (Would you say it is mild, moderate, severe, or very severe?)

<1> NONE  
<2> MILD WEAKNESS  
<3> MODERATE WEAKNESS  
<4> SEVERE WEAKNESS  
<5> VERY SEVERE WEAKNESS

<8> DO NOT KNOW  
<9> REFUSED

===>

>W8< Do you have [u]tingling sensations[n] in your wrist or hand?

<1> YES  
<5> NO

<8> DO NOT KNOW  
<9> REFUSED-NO ANSWER

===>

```
>f15<  [if W8 eq <5>] [store <1> in W8a] [store <1> in W9] [store <1> in W10] [goto W11] [endif]
        [if W8 eq <8>] [store <8> in W8a] [store <8> in W9] [store <8> in W10] [goto W11] [endif]
        [if W8 eq <9>] [store <9> in W8a] [store <9> in W9] [store <9> in W10] [goto W11] [endif]
```

>W8a< How severe are the [u]tingling sensations[n] in your wrist or hand?

(Would you say it is mild, moderate, severe, or very severe?)

<1> NONE  
<2> MILD TINGLING  
<3> MODERATE TINGLING  
<4> SEVERE TINGLING  
<5> VERY SEVERE TINGLING

<8> DO NOT KNOW  
<9> REFUSED

===>

>W9< How severe is the numbness or tingling sensations at [u]night[n]?

(Would you say mild, moderate, severe, or very severe?)

<1> NONE  
  
<2> MILD  
<3> MODERATE  
<4> SEVERE  
<5> VERY SEVERE

<8> DO NOT KNOW  
<9> REFUSED  
====>

>ID2< [allow 5][loc 14/1][store csid in ID2]  
>R2< [allow 1][preset <2>]

>fl6< [if W9 eq <1>][store <1> in W10][goto W11][endif]

>W10< How often did numbness or [u]tingling sensations[n] wake you  
during a typical night during the past two weeks?

(Would you say never, once, 2-3 times, 4-5 times, or more than  
5 times)?

<1> NEVER  
<2> ONCE  
<3> 2-3 TIMES  
<4> 4-5 TIMES  
<5> MORE THAN 5 TIMES

<8> DO NOT KNOW  
<9> REFUSED  
====>

>W11< Next, I would like to ask you some questions about how difficult  
or easy it is for you to do certain tasks.

How much difficulty do you have grasping and using small objects  
such as keys or pens?

Would you say no difficulty, mild difficulty, moderate difficulty,  
severe difficulty, or very severe difficulty?

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> VERY SEVERE DIFFICULTY

<8> DO NOT KNOW  
<9> REFUSED  
====>

>W12< For the next set of questions, once again, please tell me if you  
have no difficulty, mild difficulty, moderate difficulty  
or severe difficulty doing that activity or if you cannot do the  
activity at all due to hand or wrist symptoms.

[u]Writing[n].

(Do you have no difficulty doing this, mild difficulty, moderate  
difficulty, severe difficulty, or can you not do this activity at  
all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED  
===>

>W13< [u]Buttoning of clothes[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED  
===>

>W14< [u]Holding a book while reading[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED  
===>

>W15< [u]Gripping of a telephone handle[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED  
===>

>W16< [u]Opening a jar[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY

<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED

===>

>W17< [u]Household chores[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED

===>

>W18< [u]Carrying grocery bags[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED

===>

>W19< [u]Bathing and dressing[n].

(Do you have no difficulty doing this, mild difficulty, moderate difficulty, severe difficulty, or can you not do this activity at all due to hand or wrist symptoms).

<1> NO DIFFICULTY  
<2> MILD DIFFICULTY  
<3> MODERATE DIFFICULTY  
<4> SEVERE DIFFICULTY  
<5> CANNOT DO AT ALL

<8> DO NOT KNOW  
<9> REFUSED

===>

>W20< Since we talked with you in [fill imth] (96), have you had surgery for your wrist or hand injury?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
===>

>W26< Since we talked with you in [fill mnth] have you had a nerve conduction test because of your wrist or hand injury?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
===>[goto P0]

>S1< I am now going to read some symptoms that people with a shoulder, arm or upper extremity injury may encounter. When answering these questions, please refer to how you felt in the [u]past 7 days[n].

Using a scale from 0 to 10, where 0 means [u]no pain[n] and 10 is the worst pain imaginable, please indicate how severe your pain is for each of the following conditions.

[u]At its worst[n].

(On a scale of 0 to 10, where 0 means no pain at all and 10 is the worst pain imaginable).

<0-10> PAIN LEVEL

<98> DO NOT KNOW  
<99> REFUSED

===>

>S2< [u]When lying on the injured side[n].

(On a scale of 0 to 10, where 0 means no pain at all and 10 is the worst pain imaginable).

<0-10> PAIN LEVEL

<98> DO NOT KNOW  
<99> REFUSED

===>

>S3< [u]Reaching for something on a high shelf[n].

(On a scale of 0 to 10, where 0 means no pain at all and 10 is the worst pain imaginable).

<0-10> PAIN LEVEL

<98> DO NOT KNOW  
<99> REFUSED

===>

>S4< [u]Touching the back of your neck[n].

(On a scale of 0 to 10, where 0 means no pain at all and 10 is the worst pain imaginable).

<0-10> PAIN LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S5< [u]Pushing with the injured arm[n].

(On a scale of 0 to 10, where 0 means no pain at all and 10 is the worst pain imaginable).

<0-10> PAIN LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S6< Next, using a scale from 0 to 10, where 0 means [u]no difficulty[n] and 10 means [u]so difficult it requires help[n], please tell me much difficulty you have doing each of the following.

[u]Washing your hair[n]

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S7< [u]Washing your back[n].

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S8< [u]Putting on an undershirt or pullover sweater[n].

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S9< [u]Putting on a shirt that buttons down the front[n].

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S10< [u]Putting on your pants[n]

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S11< [u]Placing an object on a high shelf[n].

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S12< [u]Carrying a heavy object of 10 pounds[n].

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S13< [u]Removing something from your back pocket[n].

(On a scale of 0 to 10, where 0 means no difficulty and 10 means so difficult it requires help).

<0-10> DIFFICULTY LEVEL

<98> DO NOT KNOW

<99> REFUSED

====>

>S14< Since we talked with you in [fill imth], have you had surgery

for your shoulder or arm injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>S18< Since we talked with you in [fill imth], have you had x-rays or an MRI because of your shoulder or arm injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>P0< Next, I would like to ask you some questions about the types of health care you have received for your [u][fill pain][n] injury.

Since we last talked to you, have you gone to the emergency room as a result of your injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>P1< Are you currently, or have you within the last [u]six months[n] seen a health care provider or company doctor about your [fill pain]?

<1> YES

<5> NO[goto I1a]

<8> DO NOT KNOW[goto I1a]

<9> REFUSED[goto I1a]

====>

>P2< What type of health care provider is the [u]primary[n] provider of health care treatment for the injury you reported in [fill mnth] (19[fill iyr])?

(A company physician, a family physician, primary care physician, a specialist, surgeon, chiropractor, a therapist, or some other type of health care provider?)

<1> COMPANY PHYSICIAN

<2> FAMILY PHYSICIAN

<3> PRIMARY CARE PHYSICIAN (HMO)

<4> SPECIALIST

<5> SURGEON

<6> CHIROPRACTOR

<7> PHYSICAL/OCCUPATIONAL THERAPIST

<0> OTHER:SPECIFY[specify]

<98> DO NOT KNOW

<99> REFUSED

===>

>P2b< Since the time you were injured, how many visits have you made to your primary provider of health care to receive treatment for your injury?

<0> NONE, NEVER WENT

<1-50> TIMES

<98> DO NOT KNOW

<99> REFUSED

===>

>P3< Did this or another health care provider issue restrictions on the activities you can do at work?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>P4< How often have your health care providers been insensitive to your preferences for treatment? Would you say never, rarely, sometimes, often, or always?

<1> NEVER

<2> RARELY

<3> SOMETIMES

<4> OFTEN

<5> ALWAYS

<8> DO NOT KNOW

<9> REFUSED

===>

>P6< (How often have your health care providers)

made decisions without your best interests in mind?

(Never, rarely, sometimes, often, or always)?

<1> NEVER

<2> RARELY

<3> SOMETIMES

<4> OFTEN

<5> ALWAYS

<8> DO NOT KNOW

<9> REFUSED

===>

>P7< (How often have your health care providers)

Not given you a thorough explanation of your health status?

(Never, rarely, sometimes, often, or always)?

- <1> NEVER
- <2> RARELY
- <3> SOMETIMES
- <4> OFTEN
- <5> ALWAYS
  
- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>P8< Next, using a scale from 1 to 5, where 1 is not knowledgeable at all and 5 is very knowledgeable,

How knowledgeable is your health care provider about your injury?

- <1> NOT AT ALL KNOWLEDGEABLE
- <2>
  
- <4>
- <5> VERY KNOWLEDGEABLE
  
- <3> DO NOT KNOW
- <9> REFUSED
- ===>

>P9< (Using a scale from 1 to 5, where 1 is not knowledgeable at all and 5 is very knowledgeable)

How knowledgeable is your health care provider about the physical requirements of your job?

- <1> NOT AT ALL KNOWLEDGEABLE
- <2>
- <4>
- <5> VERY KNOWLEDGEABLE
  
- <3> DO NOT KNOW
- <9> REFUSED
- ===>

>I1a< Do you currently have any medical insurance?

- <1> YES
- <5> NO [goto I10]
  
- <8> DO NOT KNOW [goto I10]
- <9> REFUSED [goto I10]
- ===>

>I1b< Do you have the same medical insurance that you had at the time of your injury in [fill mnth] (1996)?

- <1> YES [goto I9]
- <5> NO
  
- <8> DO NOT KNOW
- <9> REFUSED [goto I9]

====>

====>

>I1aa< Is this medical insurance private or provided by an employer,  
Medicaid, or some other insurance?

<1> PRIVATE AND PROVIDED BY THE EMPLOYER

<2> MEDICAID[goto I4]

<3> OTHER: SPECIFY[specify]

<8> DO NOT KNOW[goto I4]

<9> REFUSED[goto I4]

====>

>I2b< Is this private medical insurance an individually purchased private  
insurance plan?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>I4< If you lost your job, would you still have health care coverage through  
your spouse or some other household member, through another source,  
or not at all?

<1> THROUGH SPOUSE OR OTHER HOUSEHOLD MEMBER

<2> ANOTHER SOURCE: SPECIFY [specify]

<3> NONE, NOT AT ALL

<98> DO NOT KNOW

<99> REFUSED

====>

>I7< Does your current insurance coverage require you to choose a primary  
care physician?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>I8< Does your primary care physician or insurer have to approve any  
contacts with specialty physicians before the insurance will cover  
care from a specialist?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>skp2< [if I1aa eq <2>] [goto I10] [endif]

>I9< Have you used your private health insurance to cover any of the costs of medical care for your [fill pain] injury?

- <1> YES
  - <5> NO[goto I10]
  
  - <8> DO NOT KNOW[goto I10]
  - <9> REFUSED[goto I10]
- ====>

>I9a< How much of your medical costs have been paid by your private insurance? Would you say most of the costs, about half of the costs, less than half of the costs or little or none of your medical costs?

- <1> MOST
  - <2> ABOUT HALF
  - <3> LESS THAN HALF
  - <4> LITTLE OR NONE
  
  - <8> DO NOT KNOW
  - <9> REFUSED
- ====>

>I10< Have you or other family members spent money on medical bills?

(For visits to the doctor, medical tests, physical therapy, prescription drugs, hospital stays or hospital-related services for treatment related to your ([u] [fill pain] [n]) injury?)

- <1> YES
  - <5> NO[goto IR0]
  
  - <8> DO NOT KNOW[goto IR0]
  - <9> REFUSED[goto IR0]
- ====>

>I10a< What was the [u] main reasons [n] for the out-of-pocket expenses? [allow 2]

- <1> DEDUCTIBLES THAT ARE A PART OF INSURANCE
  - <2> EXPENSES EXCEEDED MAXIMUM AMOUNT OF INSURANCE
  - <3> COMPANY STATED INJURY WAS NOT COVERED
  - <4> REFERRAL TO A SPECIALIST
  - <5> MEDICATION NOT COVERED
  
  - <7> OTHER REASON: SPECIFY [specify]
  
  - <98> DO NOT KNOW
  - <99> REFUSED
- ====>

>I11< How much in out-of-pocket expenses was spent?

- <0-999996> AMOUNT OF OUT POCKET EXPENSES[goto IR0]
  
  - <d> DO NOT KNOW
  - <r> REFUSED
- ====>

>I11a< Was it more than \$800, more than \$600, more than \$400 or more than

\$200?

- <1> MORE THAN \$800?
- <2> MORE THAN \$600?
- <3> MORE THAN \$400?
- <4> MORE THAN \$200?

- <8> DO NOT KNOW
- <9> REFUSED

====>

>ID3< [allow 5][loc 15/1][store csid in ID3]

>R3< [allow 1][preset <3>]

>IR0< Next, I would like to ask you some questions about your employment status.

Are you currently employed?

- <1> YES[goto IR0b]
- <5> NO

- <9> REFUSED[goto IR0b]
- ====>

>IR0a< What is the [u]main[n] reasons why you are not currently employed?  
[allow 2]

====>[specify][goto skp3]

>IR0b< When we last spoke with you on, you were employed with  
[fill comp].

Are you currently employed by this employer?

- <1> YES
- <5> NO[goto J15]

- <9> REFUSED[goto J15]
- ====>

>IR0c< Are you doing the same sort of work as when we talked  
to you (in [fill imth])?

- <1> YES
- <5> NO

- <8> DO NOT KNOW
- <9> REFUSED

====>[goto skp3]

>J15< Why are you no longer with that employer? [allow 2]

- <1> MY EMPLOYER LET ME GO BECAUSE OF MY INJURY.
- <2> JOB NO LONGER EXISTS FOR REASONS UNRELATED TO MY INJURY
- <3> RETIRED FROM THAT JOB
- <4> WANTED A JOB WITH MORE FLEXIBILITY BECAUSE OF MY INJURY
- <5> FOUND A JOB I PREFERRED TO MY PREVIOUS JOB FOR REASONS  
UNRELATED TO MY INJURY
- <6> HAD RESTRICTIONS THAT MY EMPLOYER WOULD NOT HONOR.
- <7> OTHER (PLEASE SPECIFY)[specify]

<98> DO NOT KNOW

<99> REFUSED

===>

>skp3< [if IR0 ne <5>][goto lint][endif]  
[if IR0 eq <5>][goto 2int][endif]

>1int< Now we would like to ask you about the quality of work life in  
your current job.

Please tell me if you are very dissatisfied, somewhat dissatisfied,  
somewhat satisfied or very satisfied with each of the following  
in relation to your current job.

type <g> to proceed with interview ===>[goto IR1a]

>2int< Now we would like to ask you about the quality of work life in  
your most recent job. Please tell me if you are very dissatisfied,  
somewhat dissatisfied, somewhat [u]satisfied[n], or very  
satisfied with each aspect of your most recent job.

type <g> to proceed with interview ===>

>IR1a< The first is, [u]pay and benefits[n].

(Would you say you were very dissatisfied, somewhat dissatisfied,  
somewhat satisfied, or very satisfied with this aspect of your job?)

[r]THE CODE '3' IS USED DON'T KNOW, IT IS ALSO THE MID POINT OF  
THE SCALE. MANY TIMES RESEARCHERS THROW OUT MID POINTS OR CODE THEM  
AS DON'T KNOWS, DOING IT THIS WAY SAVES THE RESEARCHER RECODING THEM[n]

<1> VERY DISSATISFIED

<2> SOMEWHAT DISSATISFIED

<4> SOMEWHAT SATISFIED

<5> VERY SATISFIED

<3> DO NOT KNOW

<9> REFUSED

===>

>IR1b< Job Security.

(Would you say you were very dissatisfied, somewhat dissatisfied,  
somewhat satisfied, or very satisfied with this aspect of your job?)

<1> VERY DISSATISFIED

<2> SOMEWHAT DISSATISFIED

<4> SOMEWHAT SATISFIED

<5> VERY SATISFIED

<3> DO NOT KNOW

<9> REFUSED

===>

>IR1c< Decision-making authority.

(Would you say you were very dissatisfied, somewhat dissatisfied, somewhat satisfied, or very satisfied with this aspect of your job?)

- <1> VERY DISSATISFIED
- <2> SOMEWHAT DISSATISFIED
  
- <4> SOMEWHAT SATISFIED
- <5> VERY SATISFIED
  
- <3> DO NOT KNOW
- <9> REFUSED
- ====>

>IRId< Use of your talents and abilities.

(Would you say you were very dissatisfied, somewhat dissatisfied, somewhat satisfied, or very satisfied with this aspect of your job?)

- <1> VERY DISSATISFIED
- <2> SOMEWHAT DISSATISFIED
  
- <4> SOMEWHAT SATISFIED
- <5> VERY SATISFIED
  
- <3> DO NOT KNOW
- <9> REFUSED
- ====>

>IRIf< Your relationships and contacts with co-workers.

(Would you say you were very dissatisfied, somewhat dissatisfied, somewhat satisfied, or very satisfied with this aspect of your job?)

- <1> VERY DISSATISFIED
- <2> SOMEWHAT DISSATISFIED
  
- <4> SOMEWHAT SATISFIED
- <5> VERY SATISFIED
  
- <3> DO NOT KNOW
- <9> REFUSED
- ====>

>IRIe< Your job as a whole.

(Would you say you were very dissatisfied, somewhat dissatisfied, somewhat satisfied, or very satisfied with this aspect of your job?)

- <1> VERY DISSATISFIED
- <2> SOMEWHAT DISSATISFIED
  
- <4> SOMEWHAT SATISFIED
- <5> VERY SATISFIED
  
- <3> DO NOT KNOW
- <9> REFUSED
- ====>

>sk3< [if IR0 ne <5>] [goto 1INT] [endif]

[if IR0 eq <5>][goto 2INT][endif]

>1INT< Next, please tell me to what extent you disagree  
or agree with each of the following statements as it relates  
to your [u]current[n] job.

type <g> to proceed with interview ==>[goto IR3]

>2INT< Next, please tell me to what extent you disagree  
or agree with each of the following statements as it relates  
to the job [u]you most recently held[n].

type <g> to proceed with interview ==>[goto IR3]

>IR3< My manager makes sure that all employee concerns are heard before  
job decisions are made.

(Would you say you strongly disagree, somewhat disagree,  
somewhat agree, or strongly agree)?

[r]THE CODE '3' IS USED DON'T KNOW, IT IS ALSO THE MID POINT OF  
THE SCALE. MANY TIMES RESEARCHERS THROW OUT MID POINTS OR CODE THEM  
AS DON'T KNOWS, DOING IT THIS WAY SAVES THE RESEARCHER RECODING THEM[n]

<1> STRONGLY DISAGREE

<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE

<5> STRONGLY AGREE

<3> DO NOT KNOW

<9> REFUSED

==>

>IR4< To make job decisions, my manager collects accurate and  
complete information.

(Would you say you strongly disagree, somewhat disagree,  
somewhat agree, or strongly agree)?

<1> STRONGLY DISAGREE

<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE

<5> STRONGLY AGREE

<3> DO NOT KNOW

<9> REFUSED

==>

>IR5< My general manager clarifies decisions and provides additional  
information when requested by employees.

(Would you say you strongly disagree, somewhat disagree,  
somewhat agree, or strongly agree)?

<1> STRONGLY DISAGREE

<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<3> DO NOT KNOW  
<9> REFUSED

====>

>IR8< When decisions are made about my job, my manager treats me with kindness and consideration.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree)?

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<3> DO NOT KNOW  
<9> REFUSED

====>

>IR9< When decisions are made about my job, my manager treats me with respect and dignity.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree)?

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<3> DO NOT KNOW  
<9> REFUSED

====>

>IR11< When decisions are made about my job, my manager deals with me in a truthful manner.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree)?

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<3> DO NOT KNOW  
<9> REFUSED

====>

>IR13< When decisions are made that affect my job, my manager shows concern for my rights as an employee.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree)?

<1> STRONGLY DISAGREE

<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE

<5> STRONGLY AGREE

<3> DO NOT KNOW

<9> REFUSED

===>

>IR17< The following questions focus on job rewards.

When you think about the rewards you received at the job you held in [fill mnth] (19[fill iyr]), please tell me how fair or unfair your employer has been in rewarding you for each of the following.

Your job responsibilities.

Would you say your rewards are very fair, somewhat fair, somewhat unfair, or very unfair?

<1> VERY FAIR

<2> SOMEWHAT FAIR

<4> SOMEWHAT UNFAIR

<5> VERY UNFAIR

<3> DO NOT KNOW

<9> REFUSED

===>

>IR18< Your work experience.

(Would you say your rewards are very fair, somewhat fair, somewhat unfair, or very unfair?)

[r]THE CODE '3' IS USED DON'T KNOW, IT IS ALSO THE MID POINT OF THE SCALE, MANY TIMES RESEARCHERS THROW OUT MID POINTS OR CODE THEM AS DON'T KNOWS, DOING IT THIS WAY SAVES THE RESEARCHER RECODING THEM[n]

<1> VERY FAIR

<2> SOMEWHAT FAIR

<4> SOMEWHAT UNFAIR

<5> VERY UNFAIR

<3> DO NOT KNOW

<9> REFUSED

===>

>IR20< Your performance on the job.

(Would you say your rewards are very fair, somewhat fair, somewhat unfair, or very unfair?)

<1> VERY FAIR

<2> SOMEWHAT FAIR

<4> SOMEWHAT UNFAIR

<5> VERY UNFAIR

<3> DO NOT KNOW

<9> REFUSED

====>

>skp5< [if IR0b eq <1>] [goto IR21] [endif] \*\*\*with same employer  
[if IR0b ge <5>] [goto 21IR] [endif] \*\*\*not with same employer

>IR21< Since you visited a health care provider in [fill mnth] (1996),  
using a scale from 1 to 5, where 1 is very unsupportive and 5  
is very supportive, how unsupportive or supportive has your  
supervisor been?

<1> VERY UNSUPPORTIVE

<2>

<4>

<5> VERY SUPPORTIVE

<3> DO NOT KNOW

<9> REFUSED

====> [goto IR22]

>21IR< Since you visited a health care provider in [fill mnth] 1996  
using a scale from 1 to 5, where 1 is very unsupportive and 5 is  
very supportive, how unsupportive or supportive was your supervisor  
at your old job?

<1> VERY UNSUPPORTIVE

<2>

<4>

<5> VERY SUPPORTIVE

<3> DO NOT KNOW

<9> REFUSED

====> [goto 22IR]

>IR22< Since your injury in [fill mnth] (1996), using a scale from 1 to 5,  
(where 1 is very unsupportive and 5 is very supportive)

How unsupportive or supportive have your co-workers been?

<1> VERY UNSUPPORTIVE

<2>

<4>

<5> VERY SUPPORTIVE

<3> DO NOT KNOW

<9> REFUSED

====> [goto IR23]

>22IR< Since your injury in [fill mnth] (1996), using a scale from 1  
to 5, (where 1 is very unsupportive and 5 is very supportive)

How unsupportive or supportive were your co-workers at your old  
job?

<1> VERY UNSUPPORTIVE

<2>

<4>

<5> VERY SUPPORTIVE

<3> DO NOT KNOW  
<9> REFUSED  
===>

>IR23< Please tell me to what extent you disagree or agree with  
the following statement.

If I am sick or injured, my employer will not want me anymore since  
there are lots of people out there ready to take my job.

(Would you say you strongly disagree, somewhat disagree, somewhat agree,  
or strongly agree)?

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE

<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<3> DO NOT KNOW  
<9> REFUSED  
===>

>IR25< Next, using a scale from 1 to 5, where 1 is [u]dis[n]courage  
strongly and 5 is encourage strongly, how would you rate  
[u]your company's policy[n] in reporting work place injuries  
at the time you became injured?

<1> DISCOURAGED STRONGLY  
<2>

<4>  
<5> ENCOURAGED STRONGLY

<3> DO NOT KNOW  
<9> REFUSED  
===>

>IR26< Using a scale from 1 to 5, (where 1 is [u]dis[n]courage strongly and  
5 is encourage strongly), how would you rate [u]your supervisor's[n]  
[u]attitude[n] in reporting work place injuries at the time you  
became injured?

<1> DISCOURAGED STRONGLY  
<2>

<4>  
<5> ENCOURAGED STRONGLY

<3> DO NOT KNOW  
<9> REFUSED  
===>

>skp6< [if IR0 eq <5>] [goto skp7] [endif]  
[if IR0c eq <1>] [goto M15a] [endif]

>M7< The next set of questions are about the physical work environment.

For each activity that I read, please tell me if you were never, rarely, sometimes, often, or always required to do that activity for the job you held in (month) (or the time that you were injured).

Stand?

(Would you say never, rarely, sometimes, often, or almost always?

- <1> NEVER
- <2> RARELY
- <3> SOMETIMES
- <4> OFTEN
- <5> ALWAYS
  
- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M8< Bend?

(Would you say never, rarely, sometimes, often, or almost always?

- <1> NEVER
- <2> RARELY
- <3> SOMETIMES
- <4> OFTEN
- <5> ALWAYS
  
- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M9< Use vibrating hand tools?

(Would you say never, rarely, sometimes, often, or almost always?

- <1> NEVER
- <2> RARELY
- <3> SOMETIMES
- <4> OFTEN
- <5> ALWAYS
  
- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M10< How often can you regulate the pace of work?

Would you say never, rarely, sometimes, often, or almost always?

- <1> NEVER
- <2> RARELY
- <3> SOMETIMES
- <4> OFTEN
- <5> ALWAYS
  
- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M11< How often can you control the choice of tasks you do in your job?

(Would you say never, rarely, sometimes, often, or almost always?

- <1> NEVER
- <2> RARELY
- <3> SOMETIMES
- <4> OFTEN
- <5> ALWAYS

- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M12< What degree of physical activity is usually required in your job?

Would you say very light, light, medium, heavy, or very heavy?

- <1> VERY LIGHT
- <2> LIGHT
- <3> MEDIUM
- <4> HEAVY
- <5> VERY HEAVY

- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M13< What is your perception of the degree of physical exertion in your job?

Would you say very light, light, medium, heavy, or very heavy?

- <1> VERY LIGHT
- <2> LIGHT
- <3> MEDIUM
- <4> HEAVY
- <5> VERY HEAVY

- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>M14< Using a 5 point scale, where 1 means no control and 5 means complete control, how much control do you have over the work methods you use to do your job?

- <1> NO CONTROL
- <2>
- <4>
- <5> COMPLETE CONTROL

- <3> DO NOT KNOW
- <9> REFUSED
- ===>

>M15a< Because of your work injury, which of the following did you or your employer do to prevent you or others from developing the same injury or becoming injured.

Changed the speed or rate of work?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>M15b< Changed the machine or tool such as added a machine guard or bought better tools?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>M15c< Fixed something that needed repairs?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>M15d< Made new safety rules?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>M15e< Rotated job or added variety?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>M15f< Made some other changes in how things are done?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>skp7< [if IR0 eq <5>] [goto J9] [endif]

Ask only if answer yes to working question at start of IR0a

>J1< Next, I would like to ask you some specific questions about your current job. How many hours do you usually work per week at that job?

<0-39> HOURS  
<40-60> HOURS  
<65> HOURS VARIED

<98> DO NOT KNOW  
<99> REFUSED

====>

>J3< Are you employed on a temporary basis, on a permanent basis, or something else?

<1> TEMPORARY BASIS  
<2> PERMANENT BASIS

<3> SOMETHING ELSE [specify]

<98> DO NOT KNOW  
<99> REFUSED

====>

>sk99< [if IR0c eq <1>] [goto J7a] [endif]

>J6< What kind of work did you do for that employer, that is, what is/was your occupation? [allow 4]

====> [specify]

>J7a< For this job (the job you held at the time of your injury) do you work for an hourly wage, an annual salary, commission, or something else?

[r] IF NECESSARY USE: We need this information so that we can [n]  
[r] compare the pay rate and pay schedules of different jobs [n]

<1> HOURLY WAGE [goto J7b]  
<2> ANNUAL SALARY [goto J7d]  
<3> COMMISSION [goto J7d]  
<4> SOMETHING ELSE: SPECIFY [specify] [goto J7d]

<98> DO NOT KNOW [goto J7d]  
<99> REFUSED [goto J7d]

====>

>J7b< What is your hourly rate of pay in dollars and cents?

[r] IWER: ENTER ONLY THE DOLLARS AT THIS SCREEN [n]

<1-30> DOLLARS

<99> REFUSED [goto J7d]

====>

>J7ba< [no erase] (What is your hourly rate of pay in dollars and cents)? [allow 3]

<00-99> CENTS

<d> DO NOT KNOW[goto J7d]

<r> REFUSED[goto J7d]

===>

>cp1< YOU HAVE INDICATED THAT THE PERSON MAKES:

[u] [fill J7b] [n] . [u] [fill J7ba] [n] PER HOUR

IF THIS IS CORRECT, THEN YOU WILL GO ONTO THE NEXT QUESTION

IF IT IS INCORRECT, THEN YOU WILL RETURN TO J7b to RE-DO YOUR RESPONSE

<1> CORRECT[goto J7d]

<5> INCORRECT[goto J7a]

===>

If answer 2, 3, or 4 to J7a, ask J7dd and Jdd7:

>J7dd< What is your best estimate of your usual earnings on this job  
before taxes or other deductions?

[r]IWER: RECORD THE DOLLAR AMOUNT HERE, ROUNDED TO THE NEAREST DOLLAR[n]

<0-999997> DOLLARS

<d> DO NOT KNOW[goto J8]

<r> REFUSED[goto J8]

===>

>Jdd7< [no erase]Is this amount weekly, biweekly or twice monthly, monthly, or  
annually?

<1> HOURLY

<2> WEEKLY

<3> BIWEEKLY OR TWICE MONTHLY

<4> MONTHLY

<5> ANNUALLY

<8> DO NOT KNOW

<9> REFUSED

===>

>ID4< [allow 5] [loc 16/1] [store csid in ID4]

>R4< [allow 1] [preset <4>]

>J7d< Including overtime pay, tips, and commissions, what are your  
usual [u]yearly[n] earnings on this job before taxes or other deductions?

[r]IF NECESSARY USE: We need this information so that we can[n]

[r]compare the pay rate and pay schedules of different jobs[n]

[r]IWER: RECORD THE DOLLAR AMOUNT HERE, ROUNDED TO THE NEAREST DOLLAR[n]

<0-999997> DOLLARS

<d> DO NOT KNOW[goto J7dd]

<r> REFUSED[goto J7dd]

===>

>cp2< INTERVIEWER: YOU HAVE INDICATED THAT THE PERSON EARNS

[u][fill J7d] dollars [u]per year[n].

IF THIS IS CORRECT, THEN YOU WILL GO ONTO THE NEXT QUESTION  
IF IT IS INCORRECT, THEN YOU WILL RETURN TO J7c to RE-DO YOUR RESPONSE

<1> CORRECT[goto J8]

<5> INCORRECT[goto J7d]

====>

>J7e< During the 3 years before your [fill pain], were you out of work for  
a month or more?

<1> YES

<5> NO[goto J8]

<8> DO NOT KNOW[goto J8]

<9> REFUSED[goto J8]

====>

>J7f< Which of the following were reasons for your being out of work  
for a month or more.

Changed employers?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>J7g< Out of work due to a work injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>J7h< Unemployed for reasons unrelated to a work injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>J7i< On strike?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J7j< Seasons or Contract work ended?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J7k< In school?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J7l< Laid-off?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J7m< In the hospital or sick for reasons unrelated to a work injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J8< At this/that job, are/were you a member of a labor union?

<1> YES

<5> NO [goto J9]

<8> DO NOT KNOW [goto J9]

<9> REFUSED [goto J9]

===>

>J21a< Using a 5 point scale, where 1 is strongly disagree and 5 is strongly agree, please indicate how strongly you agree or disagree with each of the following statements.

The union representative helped me with problems with my case

<1> STRONGLY DISAGREE

<2>

<4>

<5> STRONGLY AGREE

<3> DO NOT KNOW

<9> REFUSED

===>

>J21b< While I was recovering, the union helped keep my job open.

<1> STRONGLY DISAGREE

<2>

<4>

<5> STRONGLY AGREE

<3> DO NOT KNOW

<9> REFUSED

===>

>J21c< The union helped me return to work with restrictions.

<1> STRONGLY DISAGREE

<2>

<4>

<5> STRONGLY AGREE

<3> DO NOT KNOW

<9> REFUSED

===>

>J9< Have you been unable to work for one or more days as a result of your  
[fill pain] injury since [fill mnth] (1996)?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>j9< [if IR0 eq <5>] [goto C1] [endif]  
[if J9 ge <5>] [goto J12] [endif]

>J10a< How many days have you been unable to work as a result of your  
injury since we talked with (you in [fill imth])?

<1-6> DAYS [goto J11]

<7-365> DAYS

<998> DO NOT KNOW [goto J11]

<999> REFUSED [goto J11]

===>

>J10c< Were you off for a full week at any one time as a result of your injury  
since we talked with you in [fill imth]?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J11< Who determined when you returned to work?

Was it your employer, you, your health care provider, or some one else?

- <1> EMPLOYER
- <2> EMPLOYEE (RESPONDENT)
- <3> HEALTH CARE PROVIDER
- <4> OTHER (PLEASE SPECIFY) [specify]

<98> DO NOT KNOW

<99> REFUSED

===>

>J12< Has your employer made any changes in your job or otherwise accomodated you to keep you at work or get you back to work since we talked with you (on [fill imth])?

<1> YES

<5> NO[goto J14]

<8> DO NOT KNOW[goto J14]

<9> REFUSED[goto J14]

===>

>J13a< In which of the following ways has your employer provided assistance because of your [fill pain] injury?

Provided transportation?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J13b< (In which of the following ways has your employer provided assistance because of your [fill pain] injury)?

Provided different work hours?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J13c< (In which of the following ways has your employer provided assistance because of your [fill pain] injury)?

Changed in job requirements?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J13d< (In which of the following ways has your employer provided

assistance because of your [fill pain] injury)?

Assigned to a different job?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J13e< (In which of the following ways has your employer provided assistance because of your [fill pain] injury)?

Working at home?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J13f< (In which of the following ways has your employer provided assistance because of your [fill pain] injury)?

Any other assistance?

<1> YES: SPECIFY [specify]

<0> NO

<98> DO NOT KNOW

<99> REFUSED

===>

>J14< Were there changes in your job or worksite that you asked your employer to make as a result of your [fill pain] that were [u]never[n] made?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>J16< Were there any changes in your job or worksite that you made on your own because of your [fill pain] injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C1< The next section of our interview focuses on filing of worker's compensation claims.

Have you filed a workers compensation claim as a result of

[fill pain] injury since we talked with you in ([fill imth])

<1> YES  
<5> NO[goto C4a]

<8> DO NOT KNOW[goto C4a]  
<9> REFUSED[goto C4a]  
====>

If yes to C1, ask C2a:

>C2a< On what date did you file this claim?

<1-12> MONTH

<98> DO NOT KNOW  
<99> REFUSED  
====>

>C2aa< (On what date did you file this claim)?

<95-97> YEAR OF CLAIM

<98> DO NOT KNOW  
<99> REFUSED  
====>

>skp8< [if J9 ge <5>][goto C3b][endif] If answered yes to J9, ask C3aa - C22d (i.e., resume at C4a):

>C3aa< Did you ever ask your employer to pay you weekly workers' compensation wage loss benefits as a result of your [fill pain] injury?

<1> YES  
<5> NO[goto C3b]  
  
<8> DO NOT KNOW[goto C3b]  
<9> REFUSED[goto C3b]  
====>

>C3< Did you receive any wage replacement benefits from workers' compensation for those days?

<1> YES  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
====>

>C3b< Are your medical bills being paid by workers' compensation?

<1> YES, ENTIRELY  
<2> YES, PARTLY  
<5> NO  
  
<8> DO NOT KNOW  
<9> REFUSED  
====>

>C3ba< Did you ever ask your employer to pay for medical care that you needed as a result of your [fill pain] injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>C3c< Are you receiving rehabilitation services from workers' compensation?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>C3d< Are you receiving any other benefits from workers' compensation?

<1> YES: SPECIFY BENEFITS[specify]

<0> NO

<98> DO NOT KNOW

<99> REFUSED

====>

>C22a< For the next set of questions, please think about the workers' compensation claim for your [fill pain] injury. Using a 5 point scale where 1 is very satisfied and 5 is very dissatisfied, how satisfied were you with each of the following aspects of your claim.

The speed with which your workers' compensation claim was processed?

(On a five point scale where 1 is very satisfied and 5 is very dissatisfied).

<1> VERY SATISFIED

<2>

<4>

<5> VERY DISSATISFIED

<3> DO NOT KNOW

<9> REFUSED

====>

>C22b< The ability of the claims management staff to answer questions you had about your workers' compensation claim?

(On a five point scale where 1 is very satisfied and 5 is very dissatisfied).

<1> VERY SATISFIED

<2>

<4>

<5> VERY DISSATISFIED

<3> DO NOT KNOW

<9> REFUSED

===>

>C22c< The workers' compensation insurer's willingness to pay for your treatment?

(On a five point scale where 1 is very satisfied and 5 is very dissatisfied).

<1> VERY SATISFIED

<2>

<4>

<5> VERY DISSATISFIED

<3> DO NOT KNOW

<9> REFUSED

===>

>C22d< Getting the treatment you needed for this injury?

(On a five point scale where 1 is very satisfied and 5 is very dissatisfied).

<1> VERY SATISFIED

<2>

<4>

<5> VERY DISSATISFIED

<3> DO NOT KNOW

<9> REFUSED

===>

>C4< Have there been any disputes or disagreements with your employer or the insurance company over your claim?

<1> YES

<5> NO [goto C6a]

<8> DO NOT KNOW [goto C6a]

<9> REFUSED [goto C6a]

===>

>C5a< Which of the following have been reasons for the dispute.

Whether or not your injury is work-related?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C5b< Whether or not you can do your usual job?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C5c< Whether or not your medical treatment is appropriate?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C5d< Whether or not you are able to work?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C5e< Whether or not the employer will honor physical restrictions ordered by your physician?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C5f< Were there any other issues?

<1> YES: SPECIFY[specify]

<0> NO

<98> DO NOT KNOW

<99> REFUSED

===>

>C6a< Did you hire an attorney?

<1> YES

<5> NO [goto C4a]

<8> DO NOT KNOW [goto C4a]

<9> REFUSED [goto C4a]

===>

if yes to C6a, ask C6b - C6e:

>C6b< Why did you hire an attorney? [allow 2]

===>[specify]

>C6c< Did your attorney make you aware that his/her fees would be deducted from your workers' compensation weekly benefits?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>C6d< Did any attorney refuse to take your case?

<1> YES

<5> NO[goto C6]

<8> DO NOT KNOW[goto C6]

<9> REFUSED[goto C6]

====>

>C6e< Which of the following reasons are among the reasons the attorney(s) gave you for not taking your case?

<1> DID NOT FEEL THE CASE WAS STRONG

<2> DID NOT FEEL HE/SHE WOULD MAKE ENOUGH MONEY FROM MY CASE

<3> NOT ACCEPTING NEW CASES AT THAT TIME

<4> NOT FAMILIAR WITH WORKERS' COMPENSATION

<5> DID NOT GIVE A REASON

<6> OTHER REASON: SPECIFY[specify]

<98> DO NOT KNOW

<99> REFUSED

====>

>C6< Using a scale from 1 to 5, where 1 is very much in dispute and 5 is fully resolved, how successfully have these disputes been resolved?

<1> VERY MUCH IN DISPUTE

<2>

<4>

<5> FULLY RESOLVED

<3> DO NOT KNOW

<9> REFUSED

====>

>C4a< Have you filed a workers' compensation claim for any other injury since we talked to you in {[fill imth]}?

<1> YES

<5> NO[goto C7]

<8> DO NOT KNOW[goto C7]

<9> REFUSED[goto C7]

====>

>C4aa< What was the injury involved in that claim?

<1> WRIST

<2> BACK

<3> UPPER EXTREMITY

<4> OTHER: SPECIFY[specify]

<98> DO NOT KNOW  
<99> REFUSED-NO ANSWER  
===>

>C7< Next I would like to read you some statements that have been used to describe people's experiences with workers' compensation claims. Please tell me to what extent do you disagree or agree with each.

People who file a workers' compensation claim are discriminated against or harassed.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree).

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE  
<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<8> DO NOT KNOW  
<9> REFUSED

===>

>C8< People who file a workers compensation claim risk losing their job.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree).

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE  
<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<8> DO NOT KNOW  
<9> REFUSED

===>

>C9< People who file a workers' compensation claim risk losing future promotions and other job opportunities with my employer.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree).

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE  
<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<8> DO NOT KNOW  
<9> REFUSED

===>

>C15< If you file a workers' compensation claim, your co-workers will think you are faking or exaggerating your injury.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree).

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE  
<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<8> DO NOT KNOW  
<9> REFUSED

====>

>C16< If you file a workers' compensation claim, your supervisor will think you are faking or exaggerating your injury.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree).

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE  
<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<8> DO NOT KNOW  
<9> REFUSED

====>

>C19< [loc 17/7]Health care providers would rather not treat workers' compensation cases.

(Would you say you strongly disagree, somewhat disagree, somewhat agree, or strongly agree).

<1> STRONGLY DISAGREE  
<2> SOMEWHAT DISAGREE  
<4> SOMEWHAT AGREE  
<5> STRONGLY AGREE

<8> DO NOT KNOW  
<9> REFUSED

====>

>skp9< [if C1 ne <5>] [goto sk10] [endif]

>C10< We are interested in the factors that entered into your decision [u]not[n] to file a workers compensation claim. The following are reasons people often give for not filing a claim. For each reason, please tell me it entered into your decision [u]not[n] to file a claim.

The injury was not serious enough.

<1> YES  
<5> NO

<8> DO NOT KNOW  
<9> REFUSED

====>

>C11< You did not expect to miss work because of injury.

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C12< You did expect to miss some work but knew you would receive sick-leave or short-term disability pay from your employer.

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C13< Your medical expenses were covered by other insurance.

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>C14< You did not think injury was work related.

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

===>

>sk10< [if J9 eq <5>] [goto Y8] [endif]

>Y1< Now I'd like to know if you were paid wages or received benefits for the days you lost from work.

After your injury or illness, did you continue on the payroll, receive lost-wage benefits, or receive neither lost-wage benefits nor pay?

<1> CONTINUED ON THE PAYROLL [goto Y4]

<2> RECEIVED LOST-WAGE BENEFITS

<3> RECEIVED NEITHER LOST-WAGE BENEFITS NOR PAY [goto Y8]

<8> DO NOT KNOW [goto Y4]

<9> REFUSED [goto Y4]

===>

>Y2< From what source do you receive disability income?

<1> COMPANY OR UNION DISABILITY

<2> FEDERAL GOVERNMENT DISABILITY

<3> U.S. MILITARY DISABILITY

<4> STATE OR LOCAL GOVERNMENT DISABILITY

<5> U.S. RAILROAD RETIREMENT DISABILITY

<6> PRIVATE ACCIDENT OR DISABILITY INSURANCE

<7> WORKERS' COMPENSATION  
<8> SSDI OR SSI  
<9> OTHER, SPECIFY [specify]

<98> DO NOT KNOW  
<99> REFUSED  
===>

>Y4< Approximately what percentage of your regular wages did you receive on average over the period you were away from work?

<0-100> PERCENTAGE

<998> DO NOT KNOW  
<999> REFUSED  
===>

>Y5< Did these benefits or pay extend for the entire period that you were unable to work?

<1> YES  
<5> NO

<8> DO NOT KNOW  
<9> REFUSED  
===>

>Y6< Did you use sick leave or vacation days for any of the time you missed from work?

<1> YES  
<5> NO[goto Y8]

<8> DO NOT KNOW[goto Y8]  
<9> REFUSED[goto Y8]  
===>

>Y7< Was this the only way you could miss work and still be paid?

<1> YES  
<5> NO

<8> DO NOT KNOW  
<9> REFUSED  
===>

>Y8< Next, I would like to ask you a couple of questions about the employment of other members of your household.

Did your spouse or household partner work for pay outside the home during the year before your [fill pain] injury was diagnosed?

<1> YES[goto Y8d]  
<5> NO  
<7> NO, HAVE NO SPOUSE OR PARTNER[goto Y9]

<8> DO NOT KNOW[goto Y8d]  
<9> REFUSED[goto Y8d]  
===>

>Y8a< Has your spouse or partner worked or looked for work since you were diagnosed?

<1> YES  
<5> NO[goto Y8c]

<8> DO NOT KNOW[goto Y8c]  
<9> REFUSED[goto Y8c]  
===>

>Y8b< Why did your spouse start working or looking for work since you were diagnosed?

<1> TO MAKE UP FOR INCOME LOST BECAUSE OF YOUR INJURY  
<2> TO RECEIVE HEALTH BENEFITS LOST BECAUSE OF YOUR INJURY  
<3> TO RECEIVE OTHER BENEFITS LOST BECAUSE OF YOUR INJURY  
<4> FOR REASONS UNRELATED TO YOUR INJURY

<0> OTHER: SPECIFY[specify]

<98> DO NOT KNOW  
<99> REFUSED  
===>[goto Y8d]

>Y8c< Which of the following reasons best describes why your spouse or partner is [u]not[n] working?

<1> To assist in activities at home that you can no longer do yourself;  
<2> To assist you directly at home;  
<3> For reasons unrelated to your injury

<0> SOMETHING ELSE: SPECIFY[specify]

<98> DO NOT KNOW  
<99> REFUSED  
===>

>Y8d< Over the year prior to your [fill pain] injury, what percent of your household's total income did your spouse or partner contribute?

<0-100> PERCENT

<998> DO NOT KNOW  
<999> REFUSED  
===>

>Y8e< What percent of your household's total income does your spouse or partner contribute now?

<0-100> PERCENT

<998> DO NOT KNOW  
<999> REFUSED  
===>

>Y9< Since your injury reported in [fill mnth] have you or your family members incurred any new debt as a result of the injury?

<1> YES  
<5> NO[goto Y12]

<8> DO NOT KNOW[goto Y12]

<9> REFUSED[goto Y12]

====>

>Y9a< How much was borrowed?

<0-999997> AMOUNT BORROWED[goto Y12]

<d> DO NOT KNOW

<r> REFUSED

====>

>Y9b< Was it more than \$800, more than \$600, more than \$400, or more than \$200?

<1> MORE THAN \$800

<2> MORE THAN \$600

<3> MORE THAN \$400

<4> MORE THAN \$200

<8> DO NOT KNOW

<9> REFUSED

====>

>Y12< Have you had to apply for AFDC, food stamps, or other government benefits other than unemployment or Social Security as a result of your injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>Y13< Did you lose your home, car, or other significant asset as a result of your injury?

<1> YES

<5> NO

<8> DO NOT KNOW

<9> REFUSED

====>

>Y14< Which of the following statements best describes the extent you have had to use your savings to pay household bills because of your injury?

<1> I have completely depleted my savings

<2> I have significantly depleted my savings

<3> I have used some savings

<4> I have not used savings

<8> DO NOT KNOW

<9> REFUSED

====>

>Y11< Which of the following statements best describes the financial

impact on you and your family of paying your care?

[r]IWER: PLEASE READ THE CATEGORIES BELOW[n]

- <1> I/we have had to cut back sharply on expenses and still can't make ends meet.
- <2> I/we have had to cut back sharply on expenses but have been able to make ends meet.
- <3> I/we have had to do without some things but are getting by.
- <4> I/we have been able to pick up any extra expenses fairly easily.
- <5> So far there has been no impact.
  
- <8> DO NOT KNOW
- <9> REFUSED
- ===>

>D7< Using a scale from 1 to 5, where 1 is very disruptive and 5 is not disruptive at all, to what extent has the injury you reported in [fill mnth] (or about then) disrupted your family life?

- <1> VERY DISRUPTIVE
- <2>
  
- <4>
- <5> NOT DISRUPTIVE AT ALL
  
- <3> DO NOT KNOW
- <9> REFUSED
- ===>

>D8< Using a scale from 1 to 5, where 1 is not understanding at all and 5 is very understanding, how understanding has your family been about any limitations due to your injury?

- <1> NOT UNDERSTANDING AT ALL
- <2>
  
- <4>
- <5> VERY UNDERSTANDING
  
- <3> DO NOT KNOW
- <9> REFUSED
- ===>

>D3< Finally, I have a few demograhpic questions to ask you.

What is your current marital status?

Are you married, widowed, divorced, separated, or single never married?

- <1> MARRIED
- <2> WIDOWED
- <3> DIVORCED
- <4> SEPARATED
- <5> SINGLE, NEVER MARRIED
- <7> OTHER: SPECIFY[specify]
  
- <8> DO NOT KNOW
- <9> REFUSED

====>

>D4< How many children live with you?

<0> NO CHILDREN [goto INC1]

<1-10> CHILDREN

<98> DO NOT KNOW

<99> REFUSED [goto INC1]

====>

>D5< How many of these children are under 13?

<0> CHILDREN UNDER 13

<1-10> CHILDREN

<98> DO NOT KNOW

<99> REFUSED

====>

>INC1< To get a picture of people's financial situations, we'd like to know the general [u]range of incomes[n] of all households we interview. This is for statistical analysis purposes and your answers will be kept strictly confidential. Now, thinking about your household's total annual income from all sources (including your job), at the time of your injury was your household receiving more than \$30,000 per year?

<1> YES (\$30,000 OR MORE) [goto INC4]

<5> NO (LESS THAN \$30,000)

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

====>

>INC2< Was it \$20,000 or more?

<1> YES (\$20,000 - 29,999) [goto inca]

<5> NO (LESS THAN \$20,000) [goto INC3]

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

====>

>inca< Was it \$25,000 or more?

<1> YES (\$25,000 - 29,999) [goto lh31]

<5> NO (LESS THAN \$25,000) [goto lh31]

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

====>

>INC3< Was it \$10,000 or more?

<1> YES (\$10,000 - 19,999)

<5> NO (LESS THAN \$10,000) [goto lh31]

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

===>

>incb< Was it \$15,000 or more?

<1> YES (\$15,000 - 19,999)

<5> NO (LESS THAN \$15,000)

<98> DON'T KNOW-NO OPINION

<99> REFUSED-NO ANSWER

===> [goto lh31]

>INC4< Was it \$60,000 or more?

<1> YES [goto INC7] (\$60,000 OR MORE)

<5> NO (MORE THAN \$30,000 LESS THAN \$60,000)

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

===>

>INC5< Was it \$40,000 or more?

<1> YES (\$40,000 OR MORE) [goto INC6]

<5> NO (\$30,000 - 39,999)

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

===>

>incc< Was it \$35,000 or more?

<1> YES (\$35,000 - 39,999)

<5> NO (\$30,000 - 34,999) [goto lh31]

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

===> [goto lh31]

>INC6< Was it \$50,000 or more?

<1> YES (\$50,000 - 59,999)

<5> NO (\$40,000 - 49,999)

<98> DON'T KNOW/NO OPINION

<99> REFUSED/NO ANSWER

===> [goto lh31]

>INC7< Was it \$80,000 or more?

<1> YES (\$80,000 OR MORE) [goto INC9]

<5> NO (\$60,000 - 79,999)

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

====>

>INC8< Was it \$70,000 or more?

<1> YES (\$70,000 - 79,999)

<5> NO (\$60,000 - 69,999)

<98> DON'T KNOW-NO OPINION

<99> REFUSED-NO ANSWER

====> [goto lh31]

>INC9< Was it \$100,000 or more?

<1> YES (\$100,000 OR MORE) [goto NC11]

<5> NO (\$80,000 - 99,999)

<98> DON'T KNOW-NO OPINION [goto lh31]

<99> REFUSED-NO ANSWER [goto lh31]

====>

>NC10< Was it \$90,000 or more?

<1> YES (\$90,000 - 99,999)

<5> NO (\$80,000 - 89,999)

<98> DON'T KNOW-NO OPINION

<99> REFUSED-NO ANSWER

====> [goto lh31]

>NC11< Was it \$110,000 or more?

<1> YES (\$110,000 OR MORE)

<5> NO (\$100,000 - 109,999)

<98> DON'T KNOW-NO OPINION

<99> REFUSED-NO ANSWER

====>

>lh31< [if NC11 eq <1>] [store <15> in INC] [endif] 110,000 or more  
[if NC11 eq <5>] [store <14> in INC] [endif] 100,000 - 109,999  
[if NC10 eq <1>] [store <13> in INC] [endif] 90,000 - 99,999  
[if NC10 eq <5>] [store <12> in INC] [endif] 80,000 - 89,999  
[if INC8 eq <1>] [store <11> in INC] [endif] 70,000 - 79,999  
[if INC8 eq <5>] [store <10> in INC] [endif] 60,000 - 69,999  
[if INC6 eq <1>] [store < 9> in INC] [endif] 50,000 - 59,999  
[if INC6 eq <5>] [store < 8> in INC] [endif] 40,000 - 49,999  
[if incc eq <1>] [store < 7> in INC] [endif] 35,000 - 39,999  
[if incc eq <5>] [store < 6> in INC] [endif] 30,000 - 34,999  
[if inca eq <1>] [store < 5> in INC] [endif] 25,000 - 29,999  
[if inca eq <5>] [store < 4> in INC] [endif] 20,000 - 24,999  
[if incb eq <1>] [store < 3> in INC] [endif] 15,000 - 19,999  
[if incb eq <5>] [store < 2> in INC] [endif] 10,000 - 14,999  
[if INC3 eq <5>] [store < 1> in INC] [endif] \$10,000 or less

```
[if INC1 eq <98>] [store <98> in INC] [endif]
[if INC1 eq <99>] [store <99> in INC] [endif]

>INC< [loc 18/1] [allow 2] [goto MOD7]

>info< CALL INFORMATION IN AREA CODE [fill AREA] 555-1212
      AND SEE IF THERE IS A LISTING FOR A:

      [fill fnam] [fill lnam] at [fill radd] in
      [fill cit], [fill stat].

      <1> NEW NUMBER GIVEN
      <5> NO NEW NUMBER GIVEN [goto fnd1]
      ==>

>are2< [equiv AREA] enter the new area code here:

      <0-999>

      ==>
>newp< [equiv PNUM] [allow 7] enter new number here without a dash :

      ex: 5551212

      ==>

>k100< [store <> in dial] [goto dial]

>are3< [equiv AREA] enter the new area code here:

      <0-999> AREA CODE
      ==>

>nwp2< [equiv PNUM] [allow 7] enter new number here without a dash :

      ex: 5551212

      ==> [goto supe]
```

## **Appendix VI**

Employers appear to be paying more attention to safety issues, Bunch said in discussing the decline. Also, the base for Idaho's economy is changing from natural resources, which involves high-risk occupations such as mining, logging and farming, to safer high-technology and services sector jobs, he said.

### Occupational Illnesses

#### **Many with Occupational Diseases Do Not File for Comp, Study Says**

**M**ost workers who sustain occupational diseases do not file for workers' compensation benefits, according to a study released Dec. 8.

Of 1,609 Michigan workers with occupational diseases who were interviewed for the study, *The Michigan State University Project In Health Services Research In Occupational Safety and Health*, only 25 percent filed claims. However, the result did not surprise comp experts, who noted that the study involved a small subset of comp claims—it did not involve occupational injuries, which account for most claims.

The study looked at workers who saw their doctors in early 1997 for health problems the doctors considered occupational diseases. The goal of the study was to examine the filing behavior of people who potentially could file workers' compensation claims, said Ed Welch, director of the Workers' Compensation Center at Michigan State University.

Occupational diseases are defined as medical conditions resulting from an inherent hazard or continuous exposure characteristic of a particular job. The workers studied had occupational diseases affecting the upper extremities—the wrist, hand, shoulder, or back.

**One in Four Filed Claim.** Only one in four of the workers, who were interviewed a few weeks after their occupational disease was reported, said they filed a workers' compensation claim, according to an article in the newsletter *On Workers' Compensation*, which published the study's results. According to the study, 80 percent of those interviewed could have been eligible for medical-only benefits under comp, but only 13 percent filed for them. We "would have expected the individuals who did not lose time to have filed claims for workers' compensation benefits to cover their medical losses," Welch wrote in the article.

Sixty-two percent of those interviewed for the study did not miss time from work because of their occupationally related disease. Eighteen percent reported that they had missed some time from work.

Twenty percent of those in the study missed more than seven days of work because of their injury, which entitled them to wage loss benefits under Michigan's comp law. Seventy-seven percent of them filed for such benefits, the study found.

Michigan law requires physicians and other medical providers to file reports of known or suspected cases of occupational disease. Most of the reports came from occupational physicians who saw the patients at the request of their employer.

The study was made possible through a grant from the National Institute for Occupational Safety and Health.

The research casts "a great deal of doubt" on the assumption that those who could file valid claims do, the article said. It also suggests that good claims management by employers could be one reason for the study results. "Perhaps they are encouraging very early reporting of repetitive trauma difficulties and providing individuals with such difficulties with appropriate preventative health care and job modifications. We would hope that this might be one of the explanations of why so few people lost time from work," the article said.

**Results Not Surprising.** If employees with occupational diseases are not filing for comp when they could, it does not surprise comp experts. Roger Thompson, director of regulatory services for workers' compensation claims for Travelers Property & Casualty, said the study's results "are consistent with prior studies that have looked at the reporting of occupational disease claims."

James Ellenberger, assistant director of occupational safety and health for the AFL-CIO, said the study shows "something we have strongly suspected for a long time." It focuses on soft tissue and musculoskeletal injuries and finds that many workers with these health problems are not filing for workers' compensation, he said.

Greg Krohm, administrator of the Wisconsin Division of Workers' Compensation, said he has heard numerous anecdotes of individuals who prefer to be treated under group health because they fear filing a comp claim would lead to negative ramifications from employers.

A lot of occupational disease claims are not filed under workers' compensation because a lot of people are not aware of the connection of the disease to the job, Thompson said. "A lot of it is simply a lack of information in terms of their rights to those benefits," he said. Also, he said, many of these diseases are of a short duration and injured workers might not want to be inconvenienced by the unfamiliarity of the workers' compensation system.

**Economy's Role.** A strong economy might also play into the results, some comp experts said. "If the economic times are really good ... [workers] may not file a claim that they would otherwise file," said Bill Kahley, research director of the California Workers' Compensation Institute. "In today's superheated economy, a lot of workers do not want to lose overtime," Krohm said. He suggested that comp does not pay enough in weekly benefits to match what workers are really taking home.

Krohm also said that just because a disease is labeled occupational, it does not have to arise out of work. "The fact that the symptoms are consistent with an occupational exposure does not mean that an occupational exposure caused it," he said.

**Cost-Shifting to Group Health.** Cost shifting from workers' comp to health care may also be a factor, some observers said. "We hear anecdotally that employers are not reporting all of their medical claims and instead are having workers going to an industrial clinic, and that would be to keep their experience rating down," Kahley said. He also pointed out that not all employers are totally familiar with workers' compensation and could be sending employees to the company's group health program inadvertently.

"I think cost-shifting is a concern," Welch said in an interview. "I think the traditional view has been that employers would rather push employees to group [health] benefits and some take that view." However, he said, more progressive employees want the appropriate claims filed under workers' compensation, even if it costs more, because the claims can be managed better.

Thompson did not think employers were intentionally steering employees away from comp. However, he admits, "in many circumstances, it would be to the benefit of employers for their employees to file under their health insurance because very often, the employee pays part of the cost and they are subject to copayments and deductibles."

Thompson said insurance companies would prefer to see claims filed in the proper insurance "bucket" so they can get the correct benefits to injured workers and properly address their medical needs. Additionally, he said, insurers can then charge individual employers premiums that more accurately reflect their claims experience.

Thompson also pointed out that the study focused solely on occupational illnesses and avoided occupational injuries. Occupational injuries make up 95 percent of the claims filed in the comp system, he said. "Virtually all of those types of claims are filed in the workers' compensation system," Thompson said.

On the other hand, Ellenberger of the AFL-CIO said he suspects that many workers with work-related injuries, just like with work-related diseases, do not file for workers' compensation.

Welch said the researchers' next move is to look at what distinguishes the people who file for comp from those who do not.

## Florida

### Self-Insured Employers Train Employees More on Managed Comp Than Purchasers

**S**elf-insured employers in Florida educate their employees more about workers' compensation managed care than employers purchasing insurance, a study by the University of South Florida has found.

"The most striking result of this study is that the required employee educational component of the managed care arrangement for workers' compensation has not been uniformly or consistently implemented at the employer level in Florida," said the school, which worked with HJH Group Inc., a managed care consultant, to produce the study.

A 1993 state law required that, beginning on Jan. 1, 1997, employers furnish injured workers with medical care exclusively through a managed care arrangement certified by the Florida Agency for Health Care Administration. Comp insurers, self-insured employers, and self-insured funds are required to contract with managed care organizations to provide services and then to apply to the AHCA to have their MCA contracts approved.

Employee education about how managed care operates, specifically mentioned in AHCA rules, is considered a key element in the program. The AHCA required that a copy of the educational materials for employees be included with the applications for authorization, and some MCAs had to redo their material and resubmit

their applications because the materials they submitted were inappropriate for employees.

The state legislature authorized the state Division of Workers' Compensation to contract with the school to evaluate the mandated managed care program in five parts. A first study showed that the AHCA and other agencies that enforce the system need to offer more educational and technical assistance to managed care providers (8 BWCR 437).

This study on employer implementation used data from a statewide telephone survey of a selective sample of 13 insured employers, 10 self-insured employers, and 10 carriers/funds. The carriers responding to the survey had 1996 premium volume of \$876 million, or 44 percent of the insured market. The 10 self-insured employers had 25,915 employees. The 13 employers purchasing insurance had 3,341 employees.

**Distribution, Unfamiliarity Cited.** The study found that carriers and funds generally relied on mailings of informational materials, such as network directories, to the employers for educating the workers. The carriers provided the materials but relied on employers for implementation. Employers also had to obtain signatures from workers to show that they had been trained. There was little follow-up by the carriers.

The study also found that for employers purchasing comp insurance, the human resources and risk management staff were often unfamiliar with managed care and usually deferred to the carrier once an employee was injured.

Only one employer purchasing insurance posted information for employees, the study said.

"This suggests that employee education among insured employers about managed care in workers' compensation tends to take place at the time of injury rather than in advance," the study said.

No employer stated that it distributed the provider directories to the employees, and in most cases, no special training was provided to supervisory employees prior to an injury.

On the other hand, "it was more common to encounter field-based systems of education among self-insured employers, as well as a higher level of knowledge and awareness" among staff, the study said. Some of these employers conducted training with help from third party administrators and managed care companies. The most common method was to train the supervisor and location leader and have them train the employees, mostly with written material.

The five studies called for by law are intended to help establish a base line of information to facilitate long-term evaluation of the state's managed care initiative. Another topic for study will be a comparison of managed care and non-managed care comp programs.

## Maine

### 10.6 Percent Loss Cost Reduction Proposed, Would Mark Fourth Straight Decrease

**B**OSTON—Maine's Bureau of Insurance is evaluating a proposal for an average 10.6 percent decrease in workers' compensation loss costs, which would save employers about \$14 million in premiums in 1998.

-- anger that they were kept in the dark,

tr. National ending

-- the AFL-CIO prevent they can't file

The Rand report is available at: [www.rand.org/publications](http://www.rand.org/publications). The complete report from the LOHP at Berkeley is available at: [www.dir.ca.gov/dir/OS&H/CHSWC/navigate/navigate.html](http://www.dir.ca.gov/dir/OS&H/CHSWC/navigate/navigate.html).

**Workers Who Never File for Benefits**

The campaign by insurers and employers to blame workers for the problems in the system has resulted, some have argued, in workers being reluctant to assert their rights under workers' compensation. Workers injured or ill from the job don't want their employers, co-workers, family and friends to think that they are frauds, cheats or malingerers. They pay for their own medical care or seek treatment under their regular medical coverage, if they have it. In many cases, they never see a medical professional and they continue to work even though injured or diseased from their job.

Researchers at Michigan State University have been investigating why it is that a considerable number of workers have been passing up their right to workers' compensation. As reported recently in the publication *Ed Welch On Workers' Compensation* (December 1997), it appears that there are in fact a substantial number of people who are identified as having an occupational disease who do not seek assistance from workers' compensation.

The study, not yet published, focuses on over 1,600 people who were reported as having a work-related wrist, hand, shoulder or back disorder in early 1997. Physicians in Michigan are required to notify the state of cases of known or suspected occupational diseases. A survey of the workers in question revealed that only 25 percent of them had

filed for workers' compensation as a result of their disorder. While the vast majority missed less than the seven days that would have entitled them to lost wage benefits in that state, all medical treatment for work-related injuries and illnesses are supposed to be covered by workers' compensation.

Even more surprising was the finding that nearly one-quarter of those who did miss seven or more days from work due to their illness did not file for workers' compensation. As Ed Welch reports almost 23 percent of the workers who seemed clearly entitled to benefits did not file a claim, and 75 percent of the people who seemed to be entitled to at least medical benefits under workers' compensation did not file.

These are preliminary findings as the study is still underway. Those interested in more information on this research can contact Ed Welch at 4990 Northwind Drive, Suite 230, East Lansing, MI 48823 or via email at: [welche@pilot.msu.edu](mailto:welche@pilot.msu.edu).

**Workers' Comp Benefits Are Down!**

While certainly not a surprise to injured workers, workers' compensation benefit payments and costs declined between 1993 and 1995, from \$45.3 billion to \$43.5 billion, according to new data released by the National Academy of Social Insurance.

These are the first national figures since the Social Security Administration discontinued publishing the data in 1995 with the release of the report covering the 1992-93 period. A Workers' Compensation Steering Committee formed by the Academy, and chaired by John F. Burton, Jr., resumed work on the series with a grant from the Robert Wood Johnson Foundation. Burton explained that among the reasons for the decline were that "some states are restricting their benefits and tightening their rules about what kinds of injuries and diseases are job-related and therefore compensable from workers' compensation."