

A MILLIMAN GLOBAL FIRM



# COLORADO WORKERS' COMPENSATION CLOSED CLAIM STUDY

2002

Requested by:
State of Colorado
Department of Regulatory Agencies
Division of Insurance

**Denver, Colorado** 

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January 31, 2002

# COLORADO WORKERS' COMPENSATION CLOSED CLAIM STUDY - 2002

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# COLORADO WORKERS' COMPENSATION CLOSED CLAIM STUDY 2002 EXECUTIVE SUMMARY

### INTRODUCTION

Responding to widespread concern about the spiraling cost of workers' compensation insurance, the Colorado General Assembly enacted Senate Bill 91-218 (SB 218), effective July 1, 1991. Among the many changes implemented by SB 218 were improvements in workers' compensation data collection and reporting that would lead to a better understanding of the costs that are driving the system.

The Division of Insurance identified the data to be collected by the National Council on Compensation Insurance (NCCI) from insurance carriers. Senate Bill 114, effective April 24, 1997, requires the Executive Director to collect similar information from self insurers. In general, the required elements include:

- Basic claim information about the accident, claimant, employer, and claim administration details;
- Benefit information such as medical, indemnity, vocational rehabilitation, and expenses; and
- Legal information such as claimant attorney involvement.

Milliman USA, Inc. (Milliman) was engaged by the Division of Insurance to conduct the 2002 Colorado Workers' Compensation Closed Claim Study (2002 study).

The purpose of this study is threefold:

- To search for and obtain cost drivers associated with claims involving permanency;
- 2. To compare the results of this study with the results of the prior studies; and
- To summarize and present the data collected (Cross-Tabulation Analysis).

The objective of this executive summary is to give an overview of the information contained in the report. It will summarize the statistically significant conclusions of the report regarding those cost drivers that affect the amount of a workers' compensation claim. This executive summary will also highlight the noteworthy differences in the 2002 study as compared with the prior two studies, and it will present several data cross-tabulations. The report that supports this summary shows more extensive comparisons and greater detail.

### THE 2002 STUDY

The 2002 study continues to build upon the data collected in the earlier studies. A total sample of 7,411 claims involving permanency are now included (up from 6,241 last year). The carriers represented in the sample are Pinnacol Assurance (approximately 42% of the commercial market), 49 commercial insurers (approximately 40 % of the commercial market), and 57 self insurers (approximately 80% of self insurer market). Up until 1999, Pinnacol Assurance was known as CCIA (Colorado Compensation Insurance Authority).

For the commercial carriers and Pinnacol Assurance we relied on Detailed Claim Information (DCI) collected by NCCI along with supplemental information that we collected from the carriers on the same claims. The DCI is a continuing random sample of claims that began with accidents on or after January 1, 1991. We obtained an electronic copy of this database from NCCI as of October 2001.

For self insurer claims, we relied on data provided by the Colorado Division of Workers' Compensation (DWC). This data was also supplemented by data we collected directly from self insurers on the same claims.

For the comparison section of this study, we isolated the 421 DCI claims, and 209 self insurer claims that involved permanency and

were closed between July 1, 2000 and June 30, 2001.

For the regression analysis in this study, we utilized all claims from the prior studies since 1996 along with this year's claims. We then eliminated 1,160 claims with unknown values for any of the variables used in the regressions. This produced a total of 6,251 claims.

The chart numbers used in this executive summary are from the report. They will not necessarily be consecutively numbered in this summary.

### CONCLUSIONS

- A small upward claim cost trend was identified for indemnity, medical and total costs.
- Use of claimant attorneys continues to be significantly associated with higher indemnity, medical, and total costs.
- Employer choice of provider is not significantly associated with medical costs.
- Claims closed by settlement are more expensive than claims closed by other methods.

In performing the regression analysis, it was found that the accident year of the claim was significantly associated with higher costs, for indemnity, medical and total costs. The rate of increase (2.0% for indemnity, 3.9% for medical and 3.2% for total) is considered small. Since the exposure base for workers' compensation is payroll, it also increases with wage trend. Absent a trend in the frequency of claims, only a claim cost trend exceeding the wage trend leads to increasing workers' compensation rates. This study examined only workers' compensation claims, and not the exposures underlying those claims. Therefore, there is no information from this study to test

whether there is a frequency trend (positive or negative).

A claim cost trend was first found in the 2000 study for medical and total costs. An indemnity claim cost trend was first found in the 2001 study.

As in prior studies, claimant attorneys continued to be associated with the higher indemnity, medical, and total claim costs, and this result was significant. However, this does not necessarily imply a cause and effect relationship. Although we did control for the severity of an injury through other variables, it is possible that the presence of a claimant attorney is another indicator of the severity of a claim as larger claims may have greater opportunity for a dispute, due to their complexity. Note that the data analyzed in this study did not capture claimant attorney costs. We are therefore unable to conclude whether or not claimant attorneys are associated with higher or lower net claimant awards.

Employer choice of physician continues to not be significantly associated with different costs when compared to cases where the employer did not select, or to cases where it was unknown who was responsible for the selection. Over 85% of the claims in this study did show that the employer designated the provider.

### **REGRESSION RESULTS**

# Cost Drivers Affecting the Amount of a Workers' Compensation Claim

A cross-tabulation analysis is informative, but it does not establish whether a relationship is statistically significant. A multivariate analysis is used for this purpose.

Multivariate statistical analysis was performed to determine the marginal impact of claim characteristics on workers' compensation costs. Least squares regression was used to model indemnity, medical, and total costs as a function of claim characteristics. This technique allows us to identify those characteristics that have a significant relationship with the cost of a workers' compensation claim.

The following characteristics were significantly associated with <u>higher</u> workers' compensation costs for the identified categories of costs:

- Higher Pre-Injury Wage Indemnity, Medical and Total Costs
- Accident Year Indemnity, Medical and Total Costs
- Claimant is Male Indemnity, Medical and Total Costs
- Claimant Attorney Involvement Indemnity, Medical and Total Costs
- Self Insurer Claim Indemnity, Medical and Total Costs

- Pinnacol Assurance Claim Indemnity Costs
- Greater Number of Days to Close Indemnity, Medical and Total Costs
- Vocational Rehabilitation Used Indemnity, Medical, and Total Costs
- Hospital Used Indemnity, Medical, and Total Costs
- Surgery Used Indemnity, Medical, and Total Costs
- Closure by Negotiated Settlement Indemnity, Medical and Total Costs
- Permanent Total Claim Indemnity and Total Costs
- Fatal Claim- Indemnity and Total Costs
- Case Manager Involved Indemnity, Medical and Total Costs
- Utilization Review Involved- Medical and Total Costs
- Chiropractor Used- Indemnity, Medical and Total Costs
- Physical Therapy Used- Indemnity, Medical Costs and Total Costs

The following characteristics were significantly associated with <u>lower</u> workers' compensation costs for the identified categories of cost:

- Greater Lag to First Indemnity Payment
   Indemnity, Medical, and Total Costs
- Greater Number of Days to Report-Medical Costs

- Closure by Admission Indemnity and Total Costs
- Permanent Partial Schedule Claim -Indemnity and Total Costs
- Fatal Claim Medical Costs
- Other Permanent Benefit Types Indemnity, Medical, and Total Costs
- Early Reporting Phone Number Used -Indemnity and Total Costs

When a characteristic is listed above as significant, it implies that the statistical model indicated a 5% chance or less that the association could have been caused by randomness alone. The regression model also tested the following characteristics, and did not find significant associations with costs:

- Claimant Age
- Claimant is Married
- Employer Designated Provider

If a characteristic is listed as significant for one type of costs, but not another, this means that there was no significant association with the type of cost not listed. For example, closures by admission were found to be significantly associated with lower indemnity costs and total costs, but were not significantly associated with medical costs.

Note that while the indemnity and total costs were significantly higher for fatal claims, the medical costs were significantly lower than the base group. It is not unexpected that the medical portion of costs for fatal claims are lower than the medical costs for permanent partial unscheduled claims, while the total costs are higher.

It is important to point out the difference between association and cause and effect. Regression techniques can only determine associations; they cannot determine cause and effect. For example, a hospital stay was found to be significantly associated with higher indemnity costs. It is likely that the more serious injuries are more likely to require a hospital stay and consequently would involve higher indemnity costs. It does not imply that the hospital stay caused the higher indemnity costs.

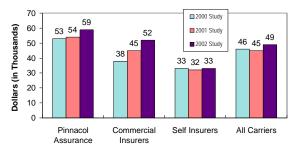
Additional variables were included primarily as controls. These were body part and nature of injury groupings, and industry groupings based on SIC code (Standard Industry Classification).

### **COMPARISONS**

## **Average Costs**

Chart 1a compares the average combined (indemnity and medical) claims cost of the latest three studies. Pinnacol Assurance generally shows the highest average costs, followed by the commercial insurers and then the self insurers.

Chart 1a - Average Combined Claim Cost



#### Claim Size

Chart 2 displays the distributions by size of claim as both percent of claims and percent of dollars for each of the studies. In both charts, the percentages are shown relative to claims less than \$100,000 in cost. We have eliminated the 68 claims over this amount from the comparison because their variability would obscure the results for claims less than \$100,000. Both the percentage of claims and the percentage of dollars in the \$50,000-\$100,000 range has continued to increase with the 2002 study.

Chart 2a - Distribution by Claim Size

Incremental Count Distribution (Percent)				
Exclud	ing Claims C	over \$100,000	)	
Size of Claim	2000 Study	2001 Study	2002 Study	
Under 1,000	0.9	1.1	0.5	
1,001 - 5,000	10.9	6.6	5.0	
5,001 - 10,000	13.8	10.4	9.3	
10,001 - 20,000	23.1	24.4	21.7	
20,001 - 30,000	15.3	18.9	18.3	
30,001 - 40,000	11.1	9.7	11.6	
40,001 - 50,000	8.5	10.7	9.6	
50,001 - 100,000	16.5	18.2	24.0	

Chart 2b - Distribution by Claim Size

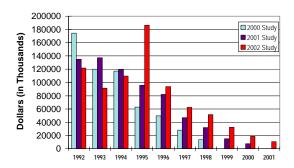
Incremental Dollar Distribution (Percent)					
Exclud	Excluding Claims Over \$100,000				
Size of Claim 2000 Study 2001 Study 2002 Study					
Under 1,000	0.0	0.0	0.0		
1,001 - 5,000	1.2	0.7	0.5		
5,001 - 10,000	3.8	2.5	2.0		
10,001 - 20,000	12.4	12.0	9.5		
20,001 - 30,000	13.5	15.0	13.6		
30,001 - 40,000	13.8	11.0	11.7		
40,001 - 50,000	14.0	15.7	12.9		
50,001 - 100,000	41.3	43.1	49.7		

# Distribution by Accident Year and Carrier

Chart 3 shows the average cost per claim by accident year since 1992 for each of the studies. It is obvious that the more recent years have lower costs. The reader should be cautioned, however, that this is not evidence of a decreasing trend, but rather is a manifestation of the expected pattern with closed claim studies. Because the earlier accident years have the opportunity to include claims with longer durations, in general, their cost is expected to be higher. The regression results show the number of days to close is significantly associated with higher costs. Thus, the pattern

shown in Chart 3 is due to differences in the time to close and other characteristics rather than due to a decreasing cost trend.

Chart 3
Average Cost by Accident Year



# **Claimant Attorney Involvement**

Attorney involvement in the studies since 1996 is defined as the use of a claimant attorney. The percent of claims closing with claimant attorney involvement has stayed at about 40% for the last three studies.

Chart 5d shows the comparison of average claim costs by attorney involvement. The pattern shown in prior studies is continued this year. That is, claims involving an attorney are more expensive.

Chart 5d - Comparison of Average Claim Costs by Attorney Involvement

•	2000	2001	2002
	Study	Study	Study
Pinnacol Assurance			
Claimant Attorney	\$78,057	\$81,205	\$82,692
No Claimant Attorney	28,828	27,291	31,576
<b>Commercial Insurers</b>			
Claimant Attorney	\$52,997	\$48,875	\$60,328
No Claimant Attorney	37,181	46,033	53,079
Self Insurers			
Claimant Attorney	\$104,326	\$59,624	\$58,851
No Claimant Attorney	21,514	21,264	21,811
All Carriers			
Claimant Attorney	\$80,739	\$72,829	\$72,597
No Claimant Attorney	27,582	31,228	35,830

### **Chiropractor Involvement**

As shown in Charts 6a to 6c, the percent of claims with chiropractors has more than doubled in this year's study.

The costs of chiropractor claims are addressed in the regression section where total medical costs are taken into account. This allows the incorporation of all the medical services that a chiropractor might provide. A comparison of the average cost of a chiropractor to the average cost of another medical provider might not consider all these services.

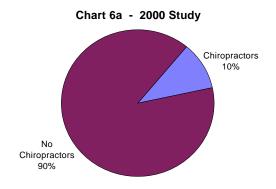
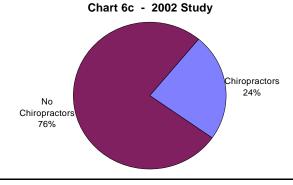


Chart 6b - 2001 Study

Chiropractors
9%

Chiropractors
91%

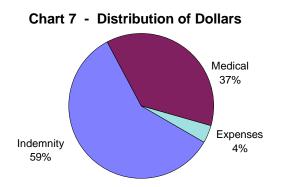


# CROSS TABULATION RESULTS

Averages are shown in this report for descriptive purposes only; they demonstrate neither a correlation nor a cause and effect relationship between variables. The averages help the reader obtain a general view of the data. Total cost in this section refers to the sum of indemnity, medical, vocational rehabilitation, and loss adjustment expenses. Since the definition of total cost in the Comparisons section above did not include the vocational rehabilitation and expense values, there will be slight differences between the results in this section and the results in the Comparisons section.

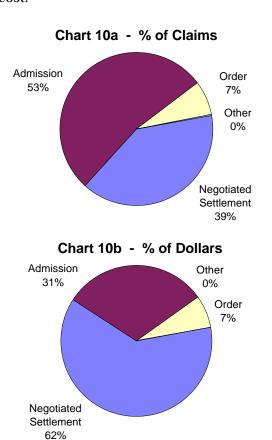
#### **Total Costs**

The total cost in the sample of new claims was approximately \$31.8 million. The distribution of costs by type are shown in Chart 7.



# Claims and Costs by Method of Closure

Method of closure is categorized as negotiated settlement, admission of liability, order, or other. The distribution of claims in this year's study continues the higher level of claims closed by negotiated settlement, and fewer claims closed by admission seen in the prior two studies. Chart 10a shows that, of the claims where method of closure was coded. 53% closed with an admission. 39% closed with a negotiated settlement, and 7% closed by an order. Chart 10b shows that claims closed by admission represented 31% of total cost, claims closed by negotiated settlement represented 62% of total cost, and claims closed by an order represented 7% of total cost.



The average total cost of claims closed by negotiated settlement is approximately two and one half times the cost of claims closed by admission, and approximately one half more than the cost of claims closed by order.

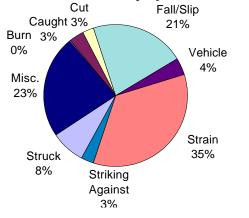
Chart 10c - Method of Closure

	Number	Dollar	Average
Method of Closure	of Claims	Cost of Claims	Cost of Claims
Negotiated Settlement	248	\$19,621,228	\$79,118
Admission	334	\$9,874,869	\$29,565
Order	47	\$2,335,141	\$49,684
Other	1	\$6,888	\$6,888
Not Reported	0	\$0	N.A.
Totals/Average	630	\$31,838,126	\$50,537

# Claims and Costs by Cause of Injury

The two most common causes of injury observed were strain and fall/slip. Chart 11a shows that 35% of the injuries in the sample were caused by a strain and 21% were caused by a fall or slip.

Chart 11a - Cause of Injury - % of Claims



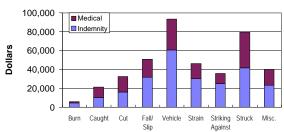
Correspondingly, the causes of injury representing the largest proportion of total costs were strain and fall/slip. Chart 11b shows that 33% of the total dollars included in the sample were from injuries caused by strain and 22% were from injuries caused by a fall or slip.

Chart 11b - Cause of Injury - % of Dollars



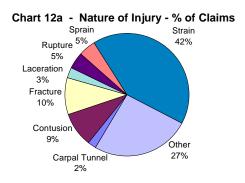
The average indemnity plus medical costs were highest for injuries in the vehicle category, followed by injuries caused by being struck by an object.

Chart 11c - Cause of Injury
Average Cost for Indemnity & Medical

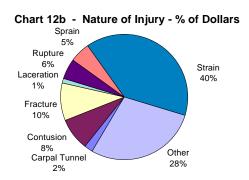


## **Claims and Costs by Nature of Injury**

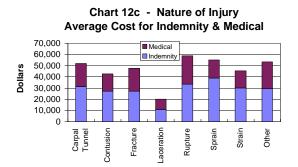
The most common natures of injury, based on percent of claims, were strain (42%), fracture (10%) and contusion (9%). Carpal Tunnel Syndrome represented approximately 2% of the claims in the study. The category of "other" shown on the charts below not only includes the "all other" that was coded, but also contains the classes that each had less than 2% of the claims sampled. These included such natures of injury as amputation, inflammation, and puncture.



The natures of injury representing the largest proportion of total cost were strain (40%), fracture (10%) and contusion (8%). Carpal Tunnel Syndrome represented less than 2% of the dollars in the study.

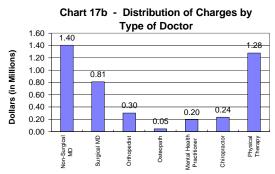


Among the natures of injury with greater than 2% of claims, the average medical plus indemnity costs were highest for ruptures and sprains.



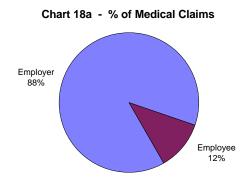
# **Components of Medical Costs**

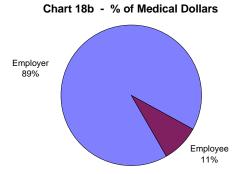
The distribution of charges by type of doctor is broken down in chart 17b.



Payments to physical therapists appeared in 81% of claims and accounted for 11% of the total medical costs. Payments to chiropractors appeared in 24% of the claims and accounted for 2% of the total medical costs (see Table 17 in Appendix C).

Charts 18a and 18b show that in 88% of the claims and 89% of the dollars, the employer designated the medical provider for the claimant. For the remaining claims, the employer did not designate or the designation was unknown.





## **Managed Care**

In this study, a claim is considered a managed care claim if one or more of the following parameters is present:

- An 800 telephone number for early reporting
- A Case Manager
- A network of doctors as in a PPO or an HMO
- Utilization Review, either prospective or retrospective

Managed care claims represent 94% of the total number of claims. Managed care was used for all of the Pinnacol Assurance claims.

### **LIMITATIONS**

In preparing this report, we relied upon data from a variety of sources. These sources included the DCI data collected by NCCI, self insurer data collected by the Colorado Department of Labor, and supplemental information collected by Milliman. While we did review the data for reasonableness and consistency, we did not audit the data for accuracy. Such an audit is beyond the scope of this assignment. If the data submitted to us are inaccurate or incomplete, the results of this report may likewise be inaccurate or incomplete.

Workers' compensation data are subject to a wide range of potential costs. We reviewed a sample of 7,411 claims. Many of the summaries and cross-tabulations will contain substantially fewer claims. Caution must be used in comparing various costs as the results may not be statistically significant or may be related to other undisclosed factors. The regression analysis in this report identifies relationships in the data that show significance.

Note that a statistically significant relationship does not imply cause and effect. It is only indicative of a relationship. Although we do discuss potential reasons for the results observed, it is highly likely that there are other plausible explanations that we have not identified.

Pinnacol Assurance operates as a market of last resort in Colorado. It is possible that their mix of business by employer represents greater hazard and potential for large loss than that of commercial insurers or self insurers.

This study is a closed claim study. For lines of insurance like workers' compensation where claims may remain open for a substantial length of time, a closed claim study will encompass claims across several time periods. Differences in benefit levels, market shares across time, and claim settlement practices will have a large impact on costs and cost comparisons. Identification of market shares across time and claim settlement practices involve exposure information that was not collected in this study. The lack of such exposure information increases the variability of results and decreases the significance of any comparisons. In addition, the comparison of averages from different time periods will be affected by the limitation of Pinnacol Assurance and commercial carrier claims to only those occurring subsequent to January 1, 1991.

# **CLOSING REMARKS**

We appreciate the opportunity to provide this report. We would like to thank the Division of Insurance, the Division of Workers' Compensation, NCCI, and the participants from Pinnacol Assurance, commercial insurers, and self insurers who submitted data. We recognize that completion of the data requested represented a significant contribution of time and effort. We would especially like to thank the participants for their prompt and courteous responses to our questions concerning the data submitted.

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January 31, 2002

# COLORADO WORKERS' COMPENSATION CLOSED CLAIM STUDY 2002

### INTRODUCTION

Responding to widespread concern about the spiraling cost of workers' compensation insurance, the Colorado General Assembly enacted Senate Bill 91-218 (SB 218), effective July 1, 1991. Among the many changes implemented by SB 218 were improvements in workers' compensation data collection and reporting that would lead to a better understanding of the costs that are driving the system.

Senate Bill 218 was a substantial reform to the then existing Colorado Workers' Compensation Act. It became quite apparent during the 1980's that workers' compensation costs were spiraling upward. However, the existing workers' compensation databases were geared to the identification of overall costs for the purpose of ratemaking and did not identify the factors driving the increases. There was some ancillary and explanatory information in the existing database, but this was considerably short of the desirable information needed to identify and correct the drivers impacting workers' compensation costs.

The lack of critical information concerning the existing workers' compensation system affected the general assembly's ability to draft the appropriate change. There was often considerable dispute concerning the potential

impact of changes and a lack of agreement concerning the problems with the system as it existed. This informational void created uncertainty concerning the costs and benefits of changes proposed.

In response to the workers' compensation reforms enacted in 1991 by the Colorado legislature, the Division of Insurance promulgated Regulation 5-3-2 which identified the data to be collected by the NCCI from insurance carriers. Senate Bill 114, effective April 24, 1997, requires the Executive Director to collect similar information from self-insurers. Self insurers contributed data in the 1996 and prior studies as well as the 1998 and subsequent studies, but were exempt from the data collection requirement during the 1997 study. In general, the required elements include:

- Basic claim information about the accident, claimant, employer, and claim administration details;
- Benefit information such as medical, indemnity, vocational rehabilitation, and expenses; and
- Legal information such as claimant attorney involvement.

These workers' compensation data reports are designed to fill the informational void concerning the cost drivers of workers' compensation. Future costs will need to be monitored to determine the effectiveness of the Senate Bill 218 reform, and to provide information so costs can continue to be controlled as changes occur and the system evolves.

Milliman USA, Inc. was engaged by the Division of Insurance to conduct the 2002 Colorado Workers' Compensation Closed Claim Study (2002 Study). Prior reports were prepared in 1996 - 2001 by Milliman and in 1990, and 1993 - 1995 by Tillinghast, a Towers Perrin Company. The Milliman reports are descriptive in nature: our objective is to present a snapshot picture of the variables affecting workers' compensation costs.

### **THE 2002 STUDY**

The 2002 study continues to build upon the data collected in the earlier studies. A total sample of 7,411 claims involving permanency are now included (up from 6,241 last year). The carriers represented in the sample are Pinnacol Assurance (approximately 42% of the commercial market), 49 commercial insurers (approximately 40% of the commercial market), and 57 self insurers (approximately 80% of the self insurer market). Up until 1999, Pinnacol Assurance was known as CCIA (Colorado Compensation Insurance Authority).

For the commercial carriers and Pinnacol Assurance we relied on Detailed Claim Information (DCI) collected by NCCI along with supplemental information that we collected from the carriers on the same claims. The DCI is a continuing random sample of claims that began with accidents on or after January 1, 1991. We obtained an electronic copy of this database from NCCI as of October 2001.

For self insurer claims, we relied on data provided by the Colorado Division of Workers' Compensation (DWC). This data was also supplemented by data we collected directly from self insurers on the same claims.

To supplement the DCI and DWC data, we collected a breakdown of medical dollars by type of provider, information on managed care, method of closure, designator of medical provider, and the number of days hospitalized.

For the comparison section of this study, we isolated all DCI claims involving permanency that closed between July 1, 2000 and June 30, 2001. This produced 421 new Pinnacol Assurance and commercial carrier claims. For self insurers, we included 209 new claims closed between July 1, 2000 and June 30, 2001.

The demographic characteristics of the new claims are set forth below:

**Demographic Characteristics of the 2002 Study** 

	Male	Female
Average Age	44.4	45.6
Marital Status	62.2% Married	52.8% Married
Percent of Claims	61.9%	38.1%
Percent of Dollars	66.1%	33.9%

For the regression analysis in this study, we utilized all DCI closed claims involving permanency and all self insurer claims from our prior studies. We then eliminated 1,160 claims with unknown values for any of the variables used in the regressions. This produced a total of 6,251 claims.

This report provides the results of the 2002 study. It is divided into the following sections: regression analysis; comparisons to the two earlier studies and cross-tabulations. Information on the sample is included in Appendix A. Appendix B contains the regression analysis, and Appendix C contains the tables of the cross-tabulation results.

# REGRESSION ANALYSIS RESULTS

Regression analysis is concerned with modeling the relationships between variables. Through the use of regression, we seek to evaluate the relationship between the cost of a claim (indemnity, medical and total) and other potential explanatory variables. Regression can be used to both determine whether a particular variable is significant in explaining the cost and to describe the nature of the relationship. When a characteristic is listed as significant, it implies that the statistical model indicated a 5% chance or less that the association could have been caused by randomness alone. In this case, we would say that the result was significant at the 0.05 (5%) level.

When interpreting the results of a regression analysis, it is important to recognize the difference between association and cause and effect. Regression only establishes whether or not there is an association between variables. It cannot determine whether a cause and effect relationship is involved. For example, the use of a case manager was found to be significantly associated with higher costs. It is likely that the more serious cases, those with potentially higher costs, require a case manager. It does not imply that the use of a case manager caused the higher cost.

In the regression analysis we are attempting to understand as many of the impacts of explanatory variables as possible. We represent total costs (indemnity, medical, and total) by a multiplicative function of the potential explanatory variables. The use of a multiplicative function allows us to express the impact in terms of percentage changes in cost. Where we show a percentage impact in the tables below, it also implies that the relationship is significant at the 5% level. Where a variable is not shown, it implies that the variable tested was not significant. If a variable is listed, but no percentage impact is shown, it implies that the particular impact was not significant for that category of loss (indemnity, medical, or total), but was significant for at least one other category of loss. Appendix B to this report shows the impact of each variable that is significant for any category of loss along with the level of significance. The shaded variables on each sheet are the ones that are not significant.

# **Nature of Injury and Part of Body**

We grouped the various nature of injury and part of body codes into one of nineteen different classes. A total of ten of these showed differences in cost that were significant. In the next table, we show the impact in terms of the percentage deviation of each group from the comparison group which is the average of the remaining nine groups not shown.

1. Type of Injury	Percentage Impact on		
1. Type of injury	Indemnity	Medical	Total
Back Sprains and Strains	64%		29%
All Other Back Injuries	75%		34%
Intermediate Fractures/Dislocations		19%	
Fractures/Dislocations Hands and Digits	-36%	-15%	-26%
Cut/Laceration/Contusion Hand and Finger	-62%	-26%	-44%
Sprains/Strains to Lower Body		-12%	
Knee Disorders		26%	7%
Neck & Head	28%		19%
Major Trauma	23%	8%	17%
Burns		29%	

It is important to recognize that the chart shows the impact of only those groups exhibiting a significant difference in cost. It is often the case that some combinations of nature of injury and part of body are more expensive (e.g., burns), but if the variation of the costs of that particular category is also large (e.g., many burns can be quite minor), then the difference will not be significant. Of the categories exhibiting significant differences, injuries to the back are the most expensive, 29% more than the comparison group for back sprains and strains, and 34% more expensive for all other back injuries. It is apparent that this difference results from the difference in indemnity costs, where back sprains are 64% more expensive than the comparison group, and all other back injuries are 75% more expensive than the comparison group. Medical costs were not significantly different from the comparison group for back injuries. The differences in costs between the other groups exhibit little surprise.

# **Type of Industry**

We grouped claims by Standard Industrial Code (SIC) groupings. We initially selected the following eleven broad groups:

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation
- Wholesale Trade
- Retail Trade
- Finance, Insurance and Real Estate
- Services
- Public Administration
- Non Classifiable or Unknown

Of these groups, only the following three showed a significant difference in cost from the average of the other groups:

2. Type of Industry	Percentage Impact on		
	Indemnity	Medical	Total
Mining	24%		20%
Construction	24%		12%
Transportation	24%		14%

It is interesting that the differences in indemnity costs for the three groups shown are driving the difference in total cost. The difference in medical costs were <u>not</u> significant for any of these groups. One potential explanation for the significantly higher indemnity costs for these SIC groups and no similar difference in medical costs may be that a given physical injury in these industries (proxied by average medical costs) is more disabling, leading to longer time loss. This could be true even though permanent partial disability benefits are impairment based. It could be that the healing periods are longer, or that the system compensates by assigning higher impairment ratings.

#### **Claimant Characteristics**

We initially tested the following four claimant characteristics for potential significant differences in cost.

- Pre-injury wage (percentage change)
- Claimant age (in years)
- Claimant gender is male (yes, no)
- Claimant is married (yes, no)

The table below shows the results for the characteristics exhibiting differences in cost that were significant.

3. Claimant Characteristics	Percentage Impact on		
	Indemnity	Medical	Total
Male	17%	6%	11%
Pre-injury Wage (Elasticity)	36%	8%	25%

Males show significantly higher costs than females. This result is consistent with the results of prior studies in this regard. Since we separately measure differences in cost resulting from pre injury wages, wage differences between males and females is not an explanation. We would expect, however, that a larger proportion of males than females may be involved in physical work where there is a greater chance of being involved in a serious accident, or where substantial physical recovery is required prior to returning to work.

We show the impact of wages as an elasticity. An elasticity describes the relationship between percentage changes. In this case, it is the relative response in costs (indemnity, medical, or total) to a percentage change in the wage. The 25% for total costs means that we expect total costs

to increase by 25% of any percentage change in wages. For example, if one worker has wages that are 10% higher than another, we expect that total benefit costs for the higher paid worker will be 2.5% higher (25% of the 10% is passed through as a workers' compensation cost).

We were somewhat surprised not to find a higher relationship between wages and benefits (i.e. closer to 100%), particularly for indemnity. Except for permanent partial scheduled benefits and the impact of minimum and maximum benefits, the indemnity benefit formula is proportional to wages. There are several potential reasons why a stronger relationship is not observed. Higher wage workers may be more likely to be in supervisory roles, and consequently, not exposed to as much hazard as lower paid workers. Higher wage workers may also have a greater opportunity cost of lost wages than lower paid workers, and therefore return to work earlier. The maximum weekly benefit would flatten the response of benefits to wages. Finally, it is possible that injuries that are settled are compensated on the basis of the severity of the injury rather than as a function of wages (e.g., adjuster and claimant agree on a specific dollar amount).

The +8% result above does confirm the widely held belief that higher medical costs are associated with higher pre-injury wages. This can result if wages and medical costs co-vary with geography (e.g., if urban workers are paid more and urban medical costs are also higher),

or if higher-paid workers are better educated and consequently demand more expensive medical treatment.

Neither age nor marital status showed a significant impact on overall costs.

## **Time Sensitive Components**

We test the following four variables for their potential impact on cost:

- Accident Year
- Length to Close (percentage change)
- Delay to Initial Report of Injury
- Delay to First Indemnity Payment

All four were significant.

4. Time Sensitive	Percentage Impact on		
Components	Indemnity Medical To		
Accident Year	2.0%	3.9%	3.2%
Length to Close (Elasticity)	80.3%	73.2%	76.7%
Report Lag		-0.1%	
First Indemnity Payment Lag	-0.1%	-0.1%	-0.1%

The positive association between accident year and costs implies that costs are increasing over time. However, the size of the relationship (3.2%) is not inconsistent with recent wage growth rates in Colorado, and is not by itself alarming. Absent a frequency trend, since the exposure base for workers compensation premium is payroll, an increase in benefit costs equal to the exposure payroll growth rate implies a stable rate trend. We calculate that an annual exposure payroll growth rate of approximately 4.3% or higher is enough to offset this accident year trend in costs. A

growth of 4.3% in exposure payroll implies an increase in benefit costs of the same magnitude and consequently no contribution to a rate trend (1.1% for the wage elasticity above (25% of 4.3%), plus the 3.2% increase in costs for the accident year trend).

We found that the length-to-close was the single characteristic having the greatest explanatory power in the regression model. It was found that the longer a claim remains open the higher the associated costs. Like wages, the impact is expressed as an elasticity. That is, the 80% impact on indemnity costs implies that if the length-to-close is increased by 100% (e.g., from one year to two), indemnity costs are increased by 80%. This is expected since indemnity payments are often paid periodically, and the more serious injuries are expected to last longer. The somewhat lower impact for medical costs is also expected. Medical costs are often characterized by high initial expenses to diagnose, stabilize and cure followed by a leveling off.

The longer the delay to report a claim, the lower the medical cost. The result above is expressed as the percentage change in costs for each day delay in reporting a claim. For example, the -0.09% impact on medical costs implies that if a claim had a 10 day delay in reporting, the medical costs are expected to be 0.9% lower. This is somewhat counter-intuitive since it is normally expected that earlier reporting allows a claim to be better managed. In fact, as we will later show, the presence of an early

reporting mechanism does indicate a reduction in costs comporting to the theory that claims that are reported earlier are better managed.

An explanation for the association between the delay in reporting and lower costs is that serious injuries are generally recognized immediately and are quickly reported. It is these claims that also incur substantial initial medical costs. Consequently, a claim that is late reported is more likely not to have been catastrophic, resulting in the negative association observed.

The number of days to the first indemnity payment is significantly associated with lower indemnity, medical, and total costs. In other words, the longer the delay in making the first indemnity payment, the lower the costs. This result is also expressed as the percentage change in costs for each day delay in the first indemnity payment. For example, the -0.1% impact on total costs implies that if a claim had a 50 day delay in first indemnity benefits, there is a 5% reduction in costs.

The delay in making the first indemnity payment is possibly due to the investigation of questionable claims, thereby resulting in the successful elimination of unnecessary costs. Another explanation for the delay is that the disability may surface at some time after the accident actually occurred. This delay causes the period of time in which payments are made to be shorter, thus resulting in fewer payments. Finally, if there is a delay in making indemnity payments, then it is likely that the initial injury

was not as severe. Certainly, most serious traumatic injuries involve a period of immediate incapacity. If the initial injury was not severe enough to involve an immediate incapacity then it is also likely that there would be lower than average initial medical treatment and lower than average indemnity and medical costs.

## **Type of Carrier**

We examined the level of costs based on the type of carrier providing the benefits. The following carrier types were compared:

- Pinnacol Assurance Claim
- Self-Insurer Claim
- Commercial Carrier Claim

The table below shows the results for the entities where the cost differences were significant.

5. Type of Carrier	Percentage Impact on		
	Indemnity	Medical	Total
Pinnacol Assurance Claim	6%		
Self-Insured Claim	15%	22%	18%

The relationships shown above are relative to the level of costs of commercial carrier claims. Again this year only the indemnity portion of Pinnacol Assurance claims showed a significant difference in costs. The indemnity portion of Pinnacol Assurance claims is 6% more expensive, and self-insurer claims are 15% more expensive than commercial claims. The implication for self insurers is that they may pay more per day open than commercial insurers, but also have fewer days open

offsetting the cost. This can occur if liberal permanent impairment benefits are offered to encourage early return to work and swift resolution. Extreme care must be used in evaluating these results, however. We found that because the length-to-close variable has such large explanatory power, the type-of-carrier variable is picking up only residual unexplained variation. We reran the model deleting the length to close variable. Neither entity exhibited significantly higher costs with this revised model.

### **Claim Characteristics**

We examined the following claim characteristics, all indicated by a yes or no response.

- Claimant attorney involvement
- Chiropractor involvement
- Claim is post-Senate Bill 218
- Physical Therapy used
- Hospital used
- Surgery used
- Vocational rehabilitation used

The next table shows the percentage change in costs associated to a yes response to any of these variables compared to a no response for the claim characteristics where the cost differences were significant.

6. Claim Characteristics	Percentage Impact on		
	Indemnity	Medical	Total
Claimant Attorney	20%	12%	16%
Chiropractor Used	14%	9%	10%
Physical Therapy Used	18%	35%	22%
Hospital Used	25%	78%	38%
Vocational Rehabilitation Used	46%	18%	42%
Surgery Used	6%	12%	6%

The presence of a claimant attorney is associated with higher claim costs. Overall, we found that costs were 20%, 12%, and 16% more expensive for the indemnity, medical, and total cost categories, respectively, when claimant attorneys were involved. There are different possible explanations for the significance of this variable. It could be that claimant attorneys are successful in obtaining higher benefits for their clients. It may also be that more serious injuries tend to be more complicated and therefore, are more likely to have an attorney. The greater impact on indemnity cost than medical could result if the presence of an attorney increases the likelihood of a settlement. We found that some carriers code all settlement dollars to the indemnity category of benefits (with a settlement, it is often not clear what the components are). If an attorney implies a greater probability of a settlement, then we would expect a somewhat larger proportion of indemnity benefits on attorney represented claims due to this coding procedure. The data call did not collect information on claimant attorney fees (often these are not known by the carriers). Therefore, we are unable to assert whether the claimant received a net benefit considering the cost of the attorney against the award.

Chiropractors were also associated with higher claim costs. We found that indemnity costs were 14% higher, medical costs were 9% higher and total costs were 10% higher when a chiropractor was involved with the claim.

We also found that the use of physical therapy is an indicator of higher cost. Indemnity, medical, and total benefit costs are 18%, 35%, and 22% higher when a claimant utilizes physical therapy. This result is not surprising since generally the more serious the medical injury, the more likely there will be physical therapy required.

The use of a hospital and the use of surgery were both found to be significantly associated with higher indemnity, medical and total costs. When an injury requires treatment in a hospital, or requires surgery, it is usually serious enough to require more medical attention and longer recovery periods. In addition, hospital stays in and of themselves entail substantial expense as indicated by the 78% increase in medical cost associated with claims involving a hospital stay.

The use of vocational rehabilitation is associated with higher costs. Specifically, indemnity, medical, and total costs were each 46%, 18%, and 42% higher than claims with no vocational rehabilitation benefits. Vocational rehabilitation is generally only necessary when someone has a serious enough disability to require a change in employment or job function. Therefore, the higher indemnity, medical, and total costs could result, not because of the use of vocational rehabilitation, but because of all the medical attention and recovery time involved in treating a serious injury or disability.

#### **Method of Closure**

We looked to the cost impact associated with the following different methods of closure:

- Negotiated settlement (yes, no)
- Admission (yes, no)
- Order (yes, no)
- Other (no for each of the above)

There were two claims closed by "other" so this category was combined with "order" to form the reference group. The table below shows the percentage change in costs associated with claims closed by settlement or admissions as compared to the reference group.

7. Method of Closure	Percentage Impact on			
	Indemnity	Medical	Total	
Settlement	42%	15%	31%	
Admission	-25%		-17%	

It was found that costs do differ by method of closure. For total costs, the ranking from most expensive to least is: negotiated settlement, order/other and admission. Negotiated settlements are 31% more expensive than claims closed by order/other, and admissions are 17% less expensive.

This result is expected since claims with settlements are likely to be complicated and disputed. Negotiated settlements, in particular, also include amounts intended to compensate the claimant for costs beyond the date of closure, and may also include compensation for facts that are disputed. Closure by admission

generally results from claims achieving their natural end at the time of final admission. These claims are likely to be less complicated, have fewer areas of dispute, and be shorter duration. Small claims tend to resolve themselves with little intervention required.

## **Benefit Types**

We looked at claims cost for the following benefit types:

- Permanent Total claim (yes, no)
- Fatal claim (yes, no)
- Permanent Partial Scheduled (yes, no)
- Other (yes, no)
- Permanent Partial Unscheduled

   (a default classification resulting from "no" on all other types)

The results are shown below, where the base group to which the others are compared is permanent partial unscheduled:

8. Benefit Type	Percentage Impact on		
	Indemnity	Medical	Total
Permanent Total	122%		89%
Permanent Partial Schedule	-21%		-15%
Fatal	98%	-49%	70%
Other	-47%	-54%	-40%

The ranking of claim cost from most expensive to least is permanent total, fatal, permanent partial unscheduled, permanent partial scheduled and other. There was a significant difference in all the categories of total loss. This is the expected ranking of claim costs in the Colorado system.

An explanation for the lower costs associated with permanent partial scheduled claims is that these claims are paid at a lower weekly rate, and that injuries to the scheduled body part members may be less disabling than injuries to unscheduled body part members.

Note that while the indemnity and the total costs were significantly higher for fatal claims, the medical costs were significantly lower than the base group. It is not unexpected that medical portion of costs for fatal claims would be lower than the medical costs for permanent partial unscheduled while in total the costs were higher.

## **Medical Management Techniques**

We reviewed the potential impact of various medical management techniques in common use, all indicated by a yes or no response:

- Employer designated medical provider
- Early reporting
- Case manager
- Utilization review

The table below shows the percentage change in costs significantly associated with a yes response as compared to a no response.

9. Medical Management	Percentage Impact on		
Techniques	Indemnity Medical To		
Early Report	-7%		-4%
Case Manager	18%	14%	17%
Utilization Review		38%	17%

The difference in costs associated with the employer designation medical provider turned out not to be significant for any of the indemnity, medical, or total categories of loss, and consequently, this variable was dropped from the model. The lack of significance associated with this variable is consistent with the last four studies. We note that a substantial majority of the claims in this study did show that the employer designated the provider. The use of a PPO network is classified as an employer designated provider.

The use of a case manager was found to be significantly associated with higher indemnity, medical, and total costs. One explanation is that the more serious cases, those with potentially higher overall costs, are assigned to a case manager.

Early reporting was based on whether telephone reporting of the claim was used at the time the claim was reported. The use of a toll-free early reporting hotline was significantly associated with 7% lower indemnity cost, and 4% lower total cost. The impact of this variable is in contrast to the reduction in cost associated with delayed reporting discussed above. We believe that there is a natural explanation. Late reported claims do tend to be lower in cost than average due to the nature of these claims. Chances are a serious claim will have a higher urgency and will be reported earlier. However, if a carrier can accelerate the reporting of all claims (serious and non-serious alike), claims can be better managed leading to lower costs.

The use of utilization review was found to be significantly associated with higher medical costs and total costs. In general, one would expect that utilization review would be employed on the higher cost claims. If the result of the utilization review was effective, this could reduce the cost of that claim toward the average.

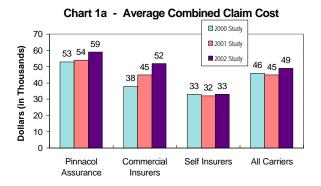
### **COMPARISONS**

The analysis in this section is a comparison of the results of the 2002 study with the results of the 2001 study and the 2000 study (the Milliman Workers' Compensation Closed Claim Studies dated January 31, 2001 and January 31, 2000). Note that for comparison purposes, the definition of cost in this section has been adapted to that used in the 1996 study. Therefore, combined cost in this section refers only to indemnity (including lump sum payments) and medical. Lump sum payments are defined to include stipulated settlements. Combined cost does not include vocational rehabilitation and expense amounts. This means that there will be slight differences between the combined results in this section and the total results in the cross-tabulation section with the difference being due to the vocational rehabilitation and expense amounts.

Note that for easy reference, the chart numbers in this section correspond to the table numbers in Appendix C.

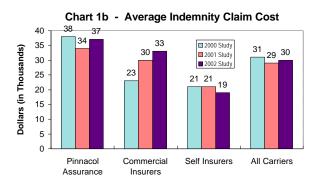
### **Average Costs**

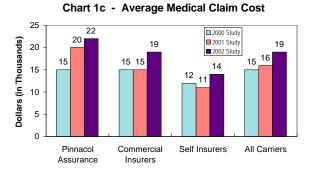
Chart 1a compares the average combined (indemnity and medical) claims cost of the latest three studies. Pinnacol Assurance generally shows the highest average costs, followed by the commercial insurers and then the self insurers.



Pinnacol Assurance has the highest percentage of claims over \$100,000 with 15% of their claims being in that catagory. Commercial insurers have 11% and self insurers have 6% of their claims in the over \$100,000 catagory.

The average costs for the indemnity and medical components are shown in Charts 1b and 1c. The comparisons of average claim costs by component for the separate entities follows the pattern of the comparison for the combined averages.





### Claim Size

Chart 2 displays the distributions by size of claim as both percent of claims and percent of dollars for each of the studies. In both charts, the percentages are shown relative to claims less than \$100,000 in cost. We have eliminated claims over this amount from the comparison because their variability would obscure the results for claims less than \$100,000. Both the percentage of claims and the percentage of dollars in the \$50,000-\$100,000 range has continued to increase with the 2002 study.

Chart 2a - Distribution by Claim Size

Incremental Count Distribution (Percent)					
Exclud	Excluding Claims Over \$100,000				
Size of Claim	2000 Study	2001 Study	2002 Study		
Under 1,000	0.9	1.1	0.5		
1,001 - 5,000	10.9	6.6	5.0		
5,001 - 10,000	13.8	10.4	9.3		
10,001 - 20,000	23.1	24.4	21.7		
20,001 - 30,000	15.3	18.9	18.3		
30,001 - 40,000	11.1	9.7	11.6		
40,001 - 50,000	8.5	10.7	9.6		
50,001 - 100,000	16.5	18.2	24.0		

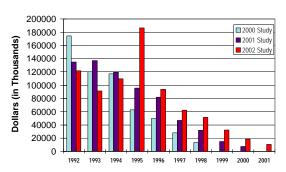
Chart 2b - Distribution by Claim Size

Incremental Dollar Distribution (Percent)					
Exclud	Excluding Claims Over \$100,000				
Size of Claim	2000 Study	2001 Study	2002 Study		
Under 1,000	0.0	0.0	0.0		
1,001 - 5,000	1.2	0.7	0.5		
5,001 - 10,000	3.8	2.5	2.0		
10,001 - 20,000	12.4	12.0	9.5		
20,001 - 30,000	13.5	15.0	13.6		
30,001 - 40,000	13.8	11.0	11.7		
40,001 - 50,000	14.0	15.7	12.9		
50,001 - 100,000	41.3	43.1	49.7		

# Distribution by Accident Year and Carrier

Chart 3 shows the average cost per claim by accident year since 1992 for each of the last three studies. It is obvious that the more recent accident years have lower costs. The reader should be cautioned, however, that this is not evidence of a decreasing trend, but rather is a manifestation of the expected pattern with closed claim studies.

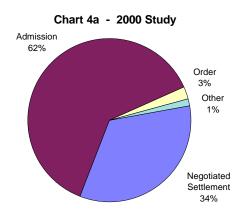
Chart 3
Average Cost by Accident Year

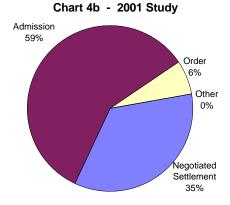


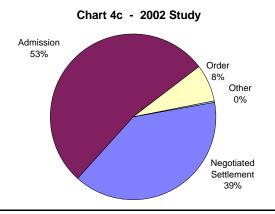
Since a closed claim study looks to accidents closed during a period for its base, it is expected that those claims taking longer to close would have arisen from an earlier accident year. In workers' compensation, longer duration claims are generally more expensive.

#### **Method of Closure**

Method of closure is categorized as negotiated settlement, admission, order, or other. Charts 4a through 4c are the percent of claims for each category of closure for the 2000, 2001 and 2002 studies, respectively. The distribution of the 2002 study continues the higher level of claims closed by negotiated settlement and fewer claims closed by admission seen in the prior two studies.







The high level of settlements is driven by Pinnacol Assurance, where negotiated settlements were 40% of their claims in the 2000 study, 38% in the 2001 study and 47% in this year's study.

Chart 4d shows the average cost of negotiated settlements compared with prior studies. The costs are shown for indemnity (including lump sums), medical, and the combined cost of indemnity and medical. The decrease in the combined average cost that was seen in last year's study appears to be leveling off this year.

Chart 4d
Average Cost of Negotiated Settlements

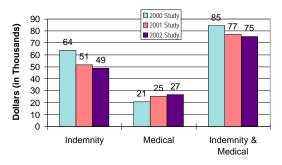
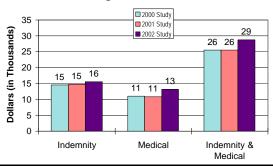


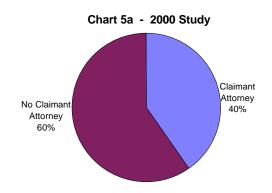
Chart 4e shows the average cost of admissions compared with prior studies. The costs are shown for indemnity (including lump sums), medical, and the combined cost of indemnity and medical. The average cost of admissions has shown a small increase this year from \$26,000 to \$29,000.

Chart 4e
Average Cost of Admissions



## **Claimant Attorney Involvement**

Attorney involvement in the studies since 1996 is defined as the use of a claimant attorney. The percent of claims closing with claimant attorney involvement has stayed at about 40% for the last three studies. It is important to recognize, however, that the studies do not include accidents prior to 1991 for Pinnacol Assurance and commercial carriers. We have found that claimant attorney involvement is generally much higher with the older claims (those taking longer to close) and each successive study loses a smaller proportion of potential claims due to the 1991 claim cutoff. Claimant attorney involvement is also likely to be related to the level of closure by negotiated settlement and order since typically, claimant attorneys are involved in these types of claims.





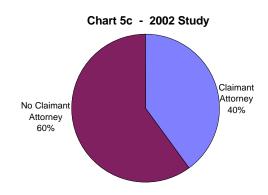


Chart 5d shows the comparison of average claim costs by attorney involvement. The pattern shown in prior studies is continued this year. That is, claims involving an attorney are more expensive.

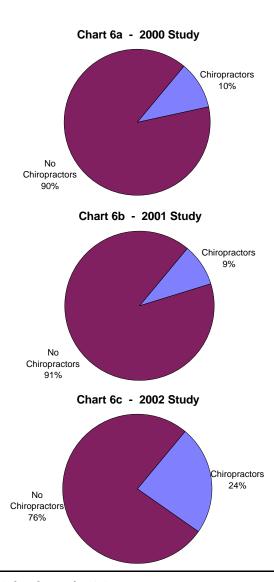
Chart 5d - Comparison of Average Claim Costs by Attorney Involvement

by Attorney involvement				
	2000	2001	2002	
	Study	Study	Study	
Pinnacol Assurance				
Claimant Attorney	\$78,057	\$81,205	\$82,692	
No Claimant Attorney	28,828	27,291	31,576	
<b>Commercial Insurers</b>				
Claimant Attorney	\$52,997	\$48,875	\$60,328	
No Claimant Attorney	37,181	46,033	53,079	
Self Insurers				
Claimant Attorney	\$104,326	\$59,624	\$58,851	
No Claimant Attorney	21,514	21,264	21,811	
All Carriers				
Claimant Attorney	\$80,739	\$72,829	\$72,597	
No Claimant Attorney	27,582	31,228	35,830	

# **Chiropractor Involvement**

As shown in Charts 6a to 6c, the percent of claims with chiropractors has more than doubled in this year's study.

The costs of chiropractor claims are addressed in the regression section where total medical costs are taken into account. This allows the incorporation of all the medical services that a chiropractor might provide. A comparison of the average cost of a chiropractor to the average cost of another medical provider might not consider all these services.



# CROSS-TABULATION RESULTS

Averages are shown in this report for descriptive purposes only; they demonstrate neither a correlation nor a cause and effect relationship between variables. The averages help the reader obtain a general view of the data.

Total cost in this section refers to indemnity, medical, vocational rehabilitation, and loss adjustment expenses. Since the definition of total cost in the Comparisons section above did not include the vocational rehabilitation or expense values, there will be slight differences between the results in this section and the results in the Comparisons section. Lump sum payment amounts are included in cost types listed above and are shown separately for information only.

Loss adjustment expenses include insurer legal expenses, insurer expert witness fees, other insurer legal costs, penalties, and other allocated loss adjustment expenses. Insurers and regulators typically define these expenses as defense and cost containment. They exclude the expenses of most insurer personnel.

Workers' compensation claims are driven by many variables which have complex interactions. Differences observed between variables are neither conclusive nor are they statistically significant per se. Any differences observed could be caused by random variations as well as by differences in other variables. The Regression Analysis section of this report discusses the relationships between the variables.

The results in this section are divided into the following categories: distribution of total dollars; injury analysis; indemnity; medical; vocational rehabilitation; attorney involvement; and time lines.

The supporting data for each of the charts below is shown in the tables of Appendix C. For easy reference, each chart number in this report corresponds to the table number in Appendix C.

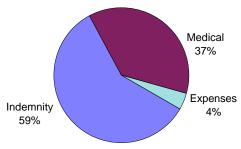
### A. Distribution of Total Dollars

This section shows the distribution of total dollars by type of cost, type of carrier, claim size, and method of closure.

### Type of Cost

The total costs in the sample of 630 claims closed from July, 2000 to June, 2001 were approximately \$31.8 million with 59% of these costs from indemnity payments, 37% from medical payments, 4% from expenses, and less than 1% from vocational rehabilitation.

Chart 7 - Distribution of Dollars



### Type of Carrier

Of the new claims sampled, 39% were from Pinnacol Assurance and represented 47% of the total cost. Commercial insurers had 28% of the claims which represented 30% of the total cost. Self insurers were 33% of the new claims sampled and 23% of the costs.

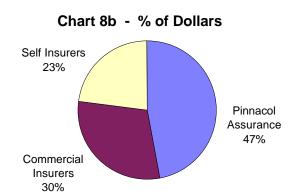
Chart 8a - % of Claims

Self Insurers
33%

Pinnacol
Assurance
39%

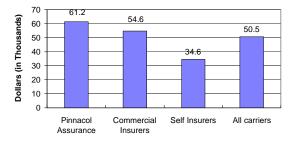
Commercial Insurers

28%



The average total cost of a claim was approximately \$61,000 for Pinnacol Assurance, \$55,000 for commercial insurers, and \$35,000 for self insurers.

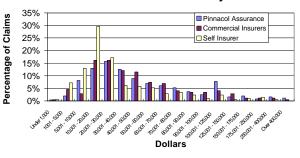
Chart 8c - Average Total Claim Cost



### **Claim Size**

Chart 9 shows that for self insurers, the largest percentage of claims in this year's study (30%) continues to be in the \$10,000 to \$20,000 range. Pinnacol Assurance has 16% of claims in the \$20,000 to \$30,000 range followed by 13% in both the \$10,000 to \$20,000 range and the \$30,000 to \$40,000 range. Commercial insurers have 16% of claims in both the \$10,000 to \$20,000 range and the \$20,000 to \$30,000 range.

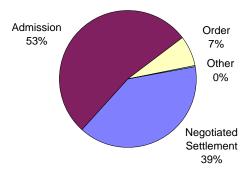
Chart 9
Distribution of Cost of Claim by Carrier

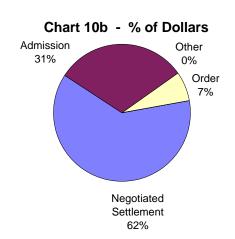


### **Method of Closure**

Method of closure is categorized as negotiated settlement, admission, order, or other. Chart 10a shows that of the claims where method of closure was coded, 53% closed with an admission, 39% closed with a negotiated settlement, and 7% closed by an order. Chart 10b shows that claims closed by admission represented 31% of total cost, claims closed by negotiated settlement represented 62% of total cost, and claims closed by an order represented 7% of total cost.

Chart 10a - % of Claims





The average total cost of claims closed by negotiated settlement is approximately two and one half times the cost of claims closed by admission, and approximately one half more than the cost of claims closed by order.

Chart 10c - Method of Closure

	Number	Dollar	Average
Method of Closure	of Claims	Cost of Claims	Cost of Claims
Negotiated Settlement	248	\$19,621,228	\$79,118
Admission	334	\$9,874,869	\$29,565
Order	47	\$2,335,141	\$49,684
Other	1	\$6,888	\$6,888
Not Reported	0	\$0	N.A.
Totals/Average	630	\$31,838,126	\$50,537

Charts 10d through 10f contain method of closure information for each of the entities.

Chart 10d Method of Closure as % of Claims

	Pinnacol	Commercial	Self	
Method of Closure	Assurance	Insurers	Insurers	
Negotiated Settlement	47%	43%	27%	
Admission	49%	36%	73%	
Order	4%	21%	0%	
Other	0%	1%	0%	

Chart 10e
Method of Closure as % of Dollars

	Pinnacol	Commercial	Self
Method of Closure	Assurance	Insurers	Insurers
Negotiated Settlement	69%	59%	49%
Admission	27%	23%	50%
Order	4%	18%	1%
Other	0%	0%	0%

Chart 10f - Average Total Dollars by Method of Closure

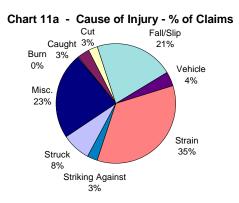
,				
	Pinnacol	Commercial	Self	
Method of Closure	Assurance	Insurers	Insurers	
Negotiated Settlement	89,512	74,755	63,244	
Admission	33,593	35,590	23,928	
Order	60,474	46,773	46,553	
Other	N.A.	6,888	N.A.	

#### **B. INJURY ANALYSIS**

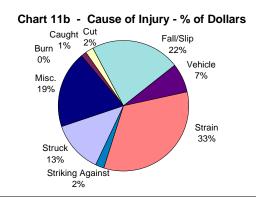
This section provides an analysis by the cause of injury, the nature of injury, and the part of body injured.

### Cause of Injury

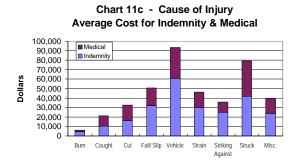
Similar to prior years, the two most common causes of injury observed were strain and fall/slip. Chart 11a shows that 35% of the injuries in the sample were caused by a strain and 21% were caused by a fall or slip.



Correspondingly, the causes of injury representing the largest proportion of total costs were also strain and fall/slip. Chart 11b shows that 33% of the total dollars included in the sample were from injuries caused by strain and 22% were from injuries caused by a fall or slip.



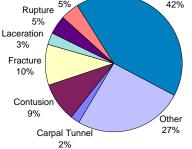
The average indemnity was highest for injuries in the vehicle category (\$61,000), followed by injuries caused by being struck by an object (\$42,000). This order was reversed for the medical costs. The average medical costs were highest for injuries caused by striking against and object (\$37,500) followed by injuries in the vehicle category (\$33,000).



Nature of Injury

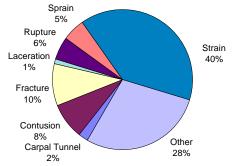
The category of "other" shown on the charts below not only includes the "all other" that was coded, but also contains the classes that each had less than 2% of the claims sampled. These included such injuries as amputation, inflammation, and puncture. Similar to prior years, the most common natures of injury, based on percent of claims, were strain (42%), fracture (10%) and contusion (9%). Carpal Tunnel Syndrome represented approximately 2% of the claims in the study.

# Chart 12a - Nature of Injury - % of Claims Sprain Strain 42%



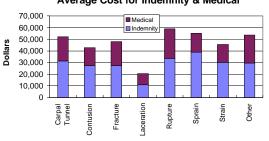
Similarly, the natures of injury representing the largest proportion of total cost were strain (40%), fracture (10%) and contusion (8%). Carpal Tunnel Syndrome represented approximately 2% of the dollars in the study.

Chart 12b - Nature of Injury - % of Dollars



Among the natures of injury with greater than 2% of claims, the combined average medical and indemnity costs were highest for ruptures and sprains.

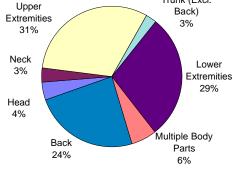
Chart 12c - Nature of Injury Average Cost for Indemnity & Medical



### Part of Body

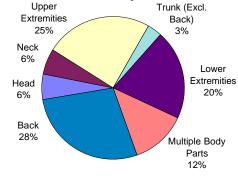
Similar to prior years, the most common parts of the body involved in injuries, based on percent of claims, were the upper extremities (31%), the lower extremities (29%), and the back (24%).

Chart 13a - Part of Body - % of Claims
Trunk (Excl.
Back)



The injuries to the trunk and back accounted for 31% of the total costs, including 28% from back injuries and 3% from other trunk injuries. Of the total costs, 25% were for injuries to the upper extremities and 20% were for injuries to the lower extremities.

Chart 13b - Part of Body - % of Dollars

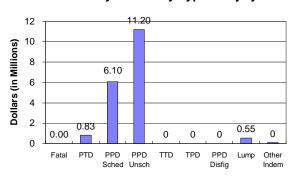


#### C. INDEMNITY

## Type of Injury

Approximately 60% of the indemnity dollars (\$11.2 million) were spent on claims involving unscheduled permanent partial disability (PPD). Scheduled permanent partial disability claims accounted for another \$6.1 million, or 32% of the total dollars.

Chart 14 Indemnity Dollars By Type of Injury

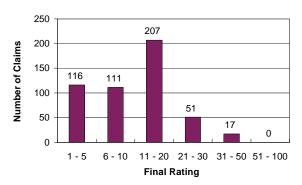


### **Impairment Rating**

In the 2002 study, 23% of claims are coded with an unknown impairment rating. This is similar to last year's study and is evidence of improved record keeping over prior years when the unknowns were as high as 70%.

Of the claims with an impairment rating, 43% have a rating of 10% or less, and 86% have a rating of 20% or less. The percentage of claims in the 11-20% range continues to increase from 36.5% last year to 42.7% this year.

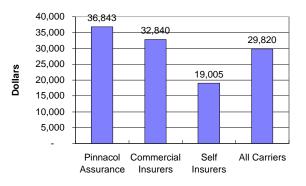
Chart 15
Impairment Rating Claim Count by Range



# Average Indemnity Costs by Type of Carrier

The Pinnacol Assurance average indemnity cost at \$36,843 is approximately 12% higher than the commercial carrier average of \$32,840 and almost double the self insurer average of \$19,005. The average for all the carriers combined is \$29,820.

Chart 16 - Average Indemnity Claim Cost



#### D. MEDICAL

#### **Distribution of Medical Costs**

Doctors (including physical therapists) account for 37% of the total medical costs and hospital charges account for 27% of the costs. The category of "other" shown in Chart 17a includes medical costs coded as "other" as well as the classes that each had less than 2% of the medical costs in the sample. These included pain rehab/work reconditioning, prosthetics, and independent medical examinations. The distribution of charges by type of doctor is broken down in Chart 17b.

Payments to physical therapists appeared in 81% of the claims and accounted for 11% of the total medical costs. Payments to chiropractors appeared in 24% of the claims and accounted for 2% of the total medical costs (see Table 17 in Appendix C).

#### **Designator of Medical Provider**

Charts 18a and 18b show that in 88% of the claims and 89% of the dollars, the employer designated the medical provider for the claim. For the remaining claims, the employer did not designate or the designation was unknown.

Chart 17a - Distribution of Medical Costs

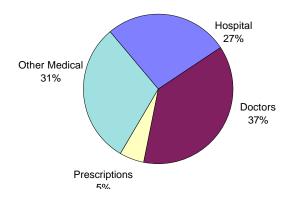


Chart 18a - % of Medical Claims

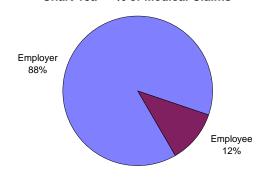


Chart 17b - Distribution of Charges by
Type of Doctor

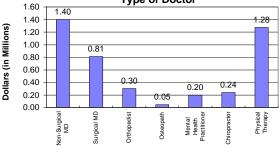
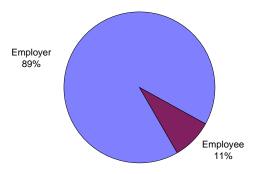


Chart 18b - % of Medical Dollars



As shown in Chart 18c, a simple comparison of average claim size indicates that the average medical cost of claims where the employer designated the medical provider is higher for commercial carriers and self insurers. Pinnacol Assurance employers designated the medical provider in 100% of their claims. The regression section found no significant association between who makes the choice of provider and higher or lower costs. The average medical costs shown in this section have not been controlled for the impact of other variables affecting costs as was done in the regression analysis.

Chart 18c
Designator of Medical Provider by Carrier Type

	Pinnacol	Assurance	Commerc	cial Insurers	Self Insurers		
	Percent	Average	Percent	Average	Percent	Average	
	of	Medical	of	Medical	of	Medical	
Designator	Claims	Cost	Claims	Cost	Claims	Cost	
Employer	100.0%	\$ 22,454	59.9%	\$ 22,739	98.6%	\$ 13,790	
Employee /							
Not Reported	0.0%		40.1%	\$ 14,159	1.4%	\$ 10,886	

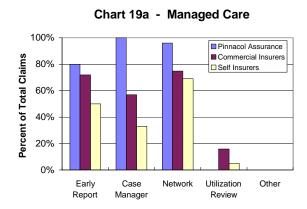
#### **Managed Care**

In this study, a claim is considered a managed care claim if one or more of the following parameters is present:

- An 800 telephone number for early reporting
- A Case Manager
- A network of doctors as in a PPO or an HMO
- Utilization Review, either prospective or retrospective

Managed care claims represent 94% of the total number of claims (see Table 19, Sheet 1

in Appendix C). Managed care was used for all of the Pinnacol Assurance claims.



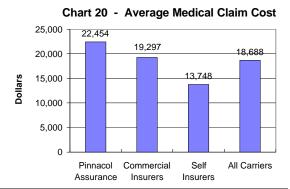
Average medical costs are higher for all entities where there is managed care.

Chart 19b - Average Medical Cost With and Without Managed Care by Carrier Type

Average Medical	A
Average iviculcal	Average Medical
Cost With	Cost Without
Managed Care	Managed Care
\$ 22,454	N/A
\$ 19,596	\$ 13,176
\$ 14,799	\$ 6,996
\$ 19,318	\$ 8,369
	Cost With  Managed Care \$ 22,454 \$ 19,596 \$ 14,799

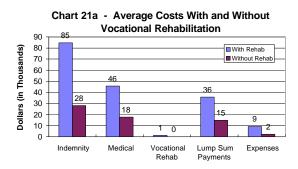
#### Average Medical Cost by Type of Carrier

The average medical claim cost was approximately \$22,500 for Pinnacol Assurance, \$19,300 commercial insurers, and \$13,700 for self insurers.

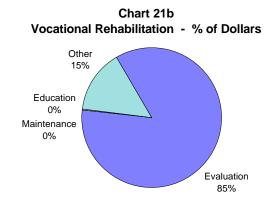


#### E. VOCATIONAL REHABILITATION

Vocational rehabilitation was categorized as evaluation, maintenance, education, and other. Of the new claims in the sample, only 19 claims involved vocational rehabilitation. Pinnacol Assurance had 5 claims involving vocational rehabilitation, commercial carriers had 7 claims and self insurers had 7 claims. Chart 21a compares the average costs of the claims in the study that involved vocational rehabilitation with the average costs of those claims that did not involve rehabilitation.

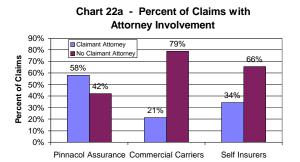


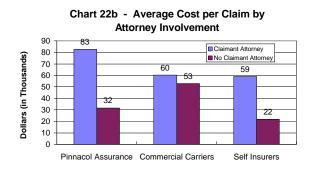
Of the vocational rehabilitation dollars in the sample, 85% was spent on evaluation. This breakdown is shown in Chart 21b.



#### F. ATTORNEY INVOLVEMENT

Attorney involvement means that the claimant had an attorney. Chart 22a shows the percent of claims with attorney involvement for each type of carrier. Chart 22b shows the average costs by attorney involvement. For commercial carriers and self insurers the majority of claims involved no claimant attorney. The average cost of a claim involving an attorney is triple those not involving an attorney for Pinnacol Assurance and self insurers but only slightly higher for commercial insurers.





#### **G. TIME LINES**

In order to present a picture of lag time, the statistical measures of the mean (average) and the median are used. The median is the middle value of a set of ordered data values observed for a particular characteristic. That is, there are as many claims with values above the median as there are below. In a long-term line of insurance like workers' compensation, the median is often more useful as an indicator because of the effect of extreme data observations on the mean. This is illustrated by the increase to 25 days of the mean lag in the date reported to employer. This increase was caused by a 1971 claim involving a prosthetic. Without this claim, the mean lag would have been 7 days.

Chart 23a Comparison of Mean Lags from Date of Injury

Comparison of Mean Lags from Date of Injury								
	2000 Mean	2001 Mean	2002 Mean					
Lag Time From Date of Injury to:	Number of Days	Number of Days	Number of Days					
Date Reported to Employer	6	5	25					
Date Reported to Insurer	26	15	39					
Date of First Indemnity Payment	118	147	217					
Date of Return to Work	113	84	159					
Date of Max Medical Improvement	433	450	454					
Date of Claim Closed	733	778	833					

The median lag for the date of first indemnity payment increased from the 2001 study from 56 days to 83 days. The median lag for the date of maximum medical improvement and the date of claim closed continued to increase from the 2000 study.

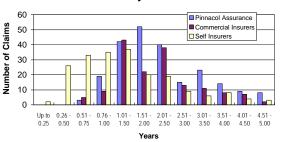
Chart 23b

Comparison of Median Lags from Date of Injury

	2000 Median	2001 Median	2002 Median			
Lag Time From Date of Injury to:	Number of Days	Number of Days	Number of Days			
Date Reported to Employer	0	0	0			
Date Reported to Insurer	6	4	3			
Date of First Indemnity Payment	26	56	83			
Date of Return to Work	14	14	77			
Date of Max Medical Improvement	298	316	316			
Date of Claim Closed	516	561	650			

The duration is the number of years from date of injury to the closing of the claim. As shown in the following chart, the most frequent duration was 1.01 to 1.5 years again this year for the commercial insurers and the self insurers. For Pinnacol Assurance, the most frequent duration has shifted this year to the 1.51 to 2.0 range.

Chart 24
Distribution by Duration of Claim



### **CHARTS**

### **COMPARISONS**

Chart 1a	-	Average Combined Claim Cost
Chart 1b	-	Average Indemnity Claim Cost
Chart 1c	_	Average Medical Claim Cost

Chart 2a - Distribution by Claim Size, Incremental Count Distribution
Chart 2b - Distribution by Claim Size, Incremental Dollar Distribution

Chart 3 - Average Cost by Accident Year
Chart 4a - Method of Closure - 2000 Study
Chart 4b - Method of Closure - 2001 Study
Chart 4c - Method of Closure - 2002 Study

Chart 4d - Average Cost of Negotiated Settlements

Chart 4e - Average Cost of Admissions

Chart 5a - Attorney Involvement - 2000 Study
Chart 5b - Attorney Involvement - 2001 Study
Chart 5c - Attorney Involvement - 2002 Study

Chart 5d - Average Claim Costs by Attorney Involvement

Chart 6a - Chiropractor Involvement - 2000 Study
Chart 6b - Chiropractor Involvement - 2001 Study
Chart 6c - Chiropractor Involvement - 2002 Study

# **CROSS-TABULATION RESULTS**

#### **DISTRIBUTION OF TOTAL DOLLARS**

Chart 7 - Distribution of Dollars

Chart 8a - Distribution by Type of Carrier - % of Claims
Chart 8b - Distribution by Type of Carrier - % of Dollars

Chart 8c - Average Total Claim Cost

Chart 9 - Distribution Claim Cost by Type of Carrier

Chart 10a - Method of Closure - % of Claims
Chart 10b - Method of Closure - % of Dollars

Chart 10c - Method of Closure

Chart 10d - Method of Closure as a % of Claims (by Carrier)
Chart 10e - Method of Closure as a % of Dollars (by Carrier)

Chart 10f - Average Total Dollars by Method of Closure

#### **INJURY ANALYSIS**

Chart 11a - Cause of Injury - % of Claims

Chart 11b - Cause of Injury - % of Dollars

Chart 11c - Cause of Injury - Average Cost for Indemnity & Medical

Chart 12a - Nature of Injury - % of Claims
Chart 12b - Nature of Injury - % of Dollars

Chart 12c - Nature of Injury - Average Cost for Indemnity & Medical

Chart 13a - Part of Body - % of Claims Chart 13b - Part of Body - % of Dollars

#### **INDEMNITY**

Chart 14 - Indemnity Dollars by Type of Injury

Chart 15 - Impairment Rating

Chart 16 - Average Indemnity Claim Cost

#### MEDICAL

Chart 17a - Distribution of Medical Costs

Chart 17b - Distribution of Charges by Type of Doctor
Chart 18a - Designator of Provider - % of Medical Claims
Chart 18b - Designator of Provider - % of Medical Dollars
Chart 18c - Designator of Medical Provider by Carrier Type

Chart 19a - Managed Care

Chart 19b - Average Medical Cost With and Without Managed Care

Chart 20 - Average Medical Claim Cost

#### **VOCATIONAL REHABILITATION**

Chart 21a - Average Costs With and Without Vocational Rehabilitation

Chart 21b - Vocational Rehabilitation - % of Dollars

#### ATTORNEY INVOLVEMENT

Chart 22a - Attorney Involvement

Chart 22b - Average Cost per Claim by Attorney Involvement

#### TIME LINES

Chart 23a - Comparison of Mean Lags from Date of Injury
Chart 23b - Comparison of Median Lags from Date of Injury

Chart 24 - Distribution by Duration of Claim

# **CLAIMS FOR THE 2002 STUDY**

# **SAMPLE**

The 2002 Study reviewed a sample of 630 new claims involving permanency that were closed between July 1, 2000, and June 30, 2001. The carriers represented in this year's sample are Pinnacol Assurance, 21 commercial insurers, and 22 self insurers.

The number and source of these claims are listed below:

# Source of New Claims in 2002 Study

Type of Carrier	Primary Source of Data	Number of Claims	
Pinnacol Assurance	DCI Database	July 1, 2000 to June 30, 2001	247
Commercial Carriers	DCI Database	July 1, 2000 to June 30, 2001	174
Self Insurers	Division of Workers' Compensation Database	July 1, 2000 to June 30, 2001	209
Total	630		

This compares to the last two years as follows:

Comparisons	2000	2001	2002
Pinnacol Assurance	386	362	247
Commercial Carriers	92	164	174
Self Insurers	198	203	209
Total	676	729	630
Regressions	4,401	5,263	6,251

For all groups of carriers, we supplemented the primary source of data with a supplementary call for information on the same claims.

The Detailed Claim Information (DCI) database is collected by the National Council on Compensation Insurance (NCCI) on a sample basis. The claims are selected randomly based on each insurer's market share. Once selected for inclusion, information must be reported on claims 6 months after accident, and annually thereafter until claims close. The database includes both open and closed claims. We obtained an electronic copy of this NCCI DCI database as of October 2001 for use in this study.

Self insurer data was obtained from the Division of Workers' Compensation, together with the supplemental data request. This sample was generated as follows:

- 1. The manual premium equivalent for the year July 1, 2000 to June 30, 2001 was determined by the DWC for each entity. Self insured employers whose permits had been cancelled or revoked in this time period, as well as those who had been self-insured during part of the year were eliminated. The remaining self insurers were ranked by premium and subdivided into quartiles.
- 2. Cases involving fatality, permanent partial disability, or permanent total disability closing during this year were initially selected. Self-insurers having three or fewer claims were eliminated.
- 3. The Division of Workers Compensation randomly selected two self-insurers from the top quartile, three from the second, five from the third, and twelve from the fourth.
- 4. Milliman USA, Inc. randomly selected 60 claims from each quartile uniformly from each self-insurer within each quartile.

The claims from Pinnacol Assurance, commercial carriers, and self insurers were combined, cross tabulations were computed and comparisons were made with the results of earlier studies.

For the regression analysis, the data collected from self-insurers for the 1996, and 1998-2001 studies were included. In addition, all closed claims from Pinnacol Assurance and the DCI Database were included. A total of 6,251 claims were used in the regression analysis. Since the DCI Database is cumulative, it is possible that some claims changed in value from the values contained in last year's study. This can occur primarily due to the correction of data, to late payments recorded after a claim has closed, and to a claim reported as closed not previously included due to data reporting lags. We compared the current DCI database to the DCI database included in last year's study. The

supplementary data request was collected on all claims in the database that closed prior to July 1, 2001 that were either new or had a change in their values.

#### **EDITING THE RESPONSES**

Responses to the request for additional information were received electronically, via floppy disk, or through hard copy. These responses were reviewed for consistency.

The sums of the medical payments of various types (Surgery, PT, prescriptions, etc.) were verified to match the "Total Medical" fields. Where they did not match, the carrier was contacted to clarify the information. Also, where hospital costs were reported but the number of days hospitalized was either coded as zero or was left blank, the carrier was contacted to determine if the hospital cost was due to an outpatient surgery or if a correction to the data was needed.

Several of the other fields were also checked to verify a valid response. "Age of Claimant at Time of Injury," "Date of Birth," "Date of Injury," "Date Claim Closed," "Method of Closure," "Cause of Injury," "Nature of Injury," "Part of Body," "Designator of Medical Provider," "Impairment Rating" and "Benefit Type" are some of the fields that were checked for validity. Again, if a response for any one of these fields was invalid or omitted, we contacted the corresponding carrier to obtain the correct information.

Individual claims were classified as either usable or unusable. Unusable claims were deleted from the database. Many of the unusable claims were deleted because the supplemental medical information received from carriers could not be reconciled with the DCI medical information. Also, several claims were deleted because their current status was open.

Regression analysis is concerned with modeling the relationships between variables. Through the use of regression, we seek to evaluate the relationship between the cost of a claim (indemnity, medical and total) and other potential explanatory variables. Regression can be used to determine whether a particular variable is significant in explaining the cost and the nature of the relationship. In most statistical analysis, including the regressions contained herein, it is common practice to adopt what is called the "Null Hypothesis." The Null Hypothesis is that the variable in question does not affect the outcome (in our case, the cost of a claim). A result is generally called significant if we are able to reject the null hypothesis with 95% certainty. That is, that the statistical model indicated a 5% chance or less that the association could have been caused by randomness alone. In this case, we would say the result was significant at the .05 (5%) level.

In the regression analysis we are attempting to understand as many of the impacts of the explanatory variables as possible. We represent the costs (indemnity, medical, and total) as a multiplicative function of the variables listed. We first transform the multiplicative function to linear by using the natural logarithm of indemnity, medical, and total cost as the dependent variable. This is a common procedure and is preferred for workers compensation losses that often exhibit significant skewness.

To test whether or not a certain variable is significant in explaining the cost of a claim, the regression analysis calculates the t-statistic for the null hypothesis. The t-statistic is calculated as the ratio of the parameter estimate to the standard error and measures whether or not the parameter estimate is significantly different from 0. We then compare the t-statistic to a critical value which is based on the number of parameters estimated (1 for each variable), and the significance level.

The standard error measures the amount of variation around the value of the parameter.

The sign of the parameter (positive or negative) indicates the direction of the association. If positive, the cost is expected to increase by the value of the parameter estimate for each unit increase in the variable. If the variable is of the yes/no variety, a positive parameter estimate indicates that the cost is expected to be higher by the amount of the parameter estimate in the presence of a yes. Since the dependent variable is a natural logarithm, the parameter estimate represents an increase in the log of the dependent variable of interest. This can be transformed to a percentage change by exponentiation (the inverse of the natural log function). This transformation is as follows:

Percentage Change = 
$$e^{(Parameter\ estimate)}$$
-1 x 100%

We also take the natural logarithm of two of the independent (right hand side or explanatory) variables prior to their use in the regression. We use the logs of wage and length to close. When transformed in this fashion, the resulting parameter estimate is an elasticity. An elasticity is a comparison of percentage changes:

# Elasticity= Percentage change in dependent variable Percentage change in independent variable

Many of the characteristics above are represented with "dummy" variables. The use of dummy variables is a standard technique to describe variables that entail a true/false or one-of-a-list of choices. An example of the true/false choice is the variable "Claimant is Male." If true, the variable is represented by a 1, and if false, by a 0. Whether or not this variable is significant refers to the change in cost with respect to the alternative. In this case, a "significant" result implies that the alternative, "Claimant is Female," is significant also, with the opposite sign.

The method of closure is an example of the one-of-a-list type of dummy variable. Again, a 1 is used to represent the variable when the condition is true, and a 0 is used when the condition is false. In this situation, we need one less variable than the number of combinations. The variable that does not appear is represented by 0's for all the rest. For example, method of closure was modeled using the following list:

- negotiated settlement,
- admission,
- order.
- and other.

The variable "other" does not explicitly appear. Rather, it is modeled with 0's (false) for the other three, forming the comparison or reference group. In this case, we found that closure types "other" and "order" did not differ significantly in costs. We changed the list so that only settlement and admission were represented by 1's when true. The comparison group then changed to the combination of "order" and "other."

The statistical output from the regression can also be used to consider other combinations without re-running the regressions and changing the base. This technique was used, for example, to determine that permanent partial schedule and "other" benefit type differed significantly in cost.

For each of the regression models that follows we show the variable name, the parameter estimate, the standard error, the t-statistic for the null hypothesis, and the significance level. We have shaded the parameter estimates that are not statistically significant at the .05 level.

We also show the F value and the  $R^2$  value for each of the models. The F value shows that for each of the models the regression is highly significant. The  $R^2$  value the proportion of the variation in cost that has been explained by the regression model.

Model - Natural Logarithm of Indemnity costs as Linear Function F Statistic= 238.54 Prob >F= 0.0001

 $R^2 = 0.6217$ 

	D	D	01 - 1 - 1		0::
Independent Veriable	Degrees of Freedom	Parameter Estimate	Standard	T Statistic	Significance Prob> T
Independent Variable	FIECUOIII	⊏sumate	<b>□1101</b>	Statistic	F100> 1
Type of Injury					
Back Sprains and Strains	1	0.4918	0.0343	14.3400	0.0001
All Other Back Injuries	1	0.5576	0.0713	7.8200	0.0001
Intermediate Fractures/Dislocations	1	-0.0544	0.0463	-1.1700	0.2402
Fractures/Dislocations Hands and Digits	1	-0.4415	0.0487	-9.0700	0.0001
Cut/Laceration/Contusion Hand and Finger	1	-0.9713	0.0487	-19.9400	0.0001
Sprains/Strains to Lower Body	1	0.1142	0.0687	1.6600	0.0966
Knee Disorders	1	0.0084	0.0350	0.2400	0.8112
Neck & Head	1	0.2504	0.0659	3.8000	0.0001
Major Trauma	1	0.2072	0.0412	5.0300	0.0001
Burns	1	-0.2224	0.1284	-1.7300	0.0833
Type of Industry					
Type of Industry Mining	1	0.2128	0.0883	2.4100	0.0160
Construction	1 1	0.2126	0.0303	7.4300	0.0001
Transportation	1	0.2133	0.0382	5.5800	0.0001
	1	0.2100	0.0002	0.0000	
Claimant Characteristics					
Male	1	0.1564	0.0258	6.0700	0.0001
Wage (Elasticity)	1	0.3633	0.0221	16.4500	0.0001
		•	<u>'</u>		
Time Sensitive Components					
Accident Year	1	0.0200	0.0072	2.8000	0.0051
Length to Close (Elasticity)	1	0.8030	0.0210	38.2900	0.0001
Lag to Report	1	0.0001	0.0002	0.2900	0.7691
Lag to First Indemnity Payment	1	-0.0011	0.0001	-14.1700	0.0001
Turns of Comics					
Type of Carrier Pinnacol Assurance Claim	1	0.0606	0.0274	2.2100	0.0269
Self-Insured Claim	1	0.0000	0.0274	3.0900	0.0209
Jen-msured Claim	'	0.1303	0.0440	3.0300	0.0020
Claim Characteristics (Impact if Yes)					
Claimant Attorney	1	0.1850	0.0286	6.4600	0.0001
Chiropractor Used	1	0.1343	0.0397	3.3900	0.0007
Physical Therapy Used	1	0.1621	0.0229	7.1000	0.0001
Hospital Used	1	0.2256	0.0275	8.2100	0.0001
Vocational Rehabilitation Used	1	0.3762	0.0525	7.1600	0.0001
Surgery Used	1	0.0557	0.0249	2.2300	0.0256
Method to Close (Base is Closed by Order)				=	
Settlement	1	0.3493	0.0467	7.4900	0.0001
Admission	1	-0.2913	0.0430	-6.7700	0.0001
Injury Type (Pace is Borm, Partial Unscheduled)					
Injury Type (Base is Perm. Partial Unscheduled) Permanent Total	1	0.7958	0.1280	6.2200	0.0001
Permanent Partial Schedule	1	-0.2369	0.1260	-8.7700	0.0001
Fatal	1 1	0.6817	0.0270	4.6100	0.0001
Other	1	-0.6291	0.0855	-7.3600	0.0001
Managed Care Techniques					
Early Report	1	-0.0770	0.0257	-3.0000	0.0027
Case Manager	1	0.1650	0.0250	6.6100	0.0001
Utilization Review	1	0.0770	0.0523	1.4700	0.1411
Intercept	1	-0.1422	0.7378	-0.1900	0.8472

 $\begin{tabular}{ll} Model - Natural Logarithm of Medical costs as Linear Function \\ F Statistic= & 127.74 & Prob > F= & 0.0001 \end{tabular}$ 

 $R^2 = 0.4681$ 

	Degrace of	Parameter	Standard	Т	Significance
Independent Variable	Freedom	Estimate	Error	Statistic	Prob> T
moopondont variable	i icedoili	Lounald	L1101	Otalistic	1 100/[1]
Type of Injury					
Back Sprains and Strains	1	-0.0216	0.0318	-0.6800	0.4971
All Other Back Injuries	1	0.0055	0.0661	0.0800	0.9338
Intermediate Fractures/Dislocations	1	0.1749	0.0429	4.0700	0.0001
Fractures/Dislocations Hands and Digits	1	-0.1646	0.0452	-3.6400	0.0003
Cut/Laceration/Contusion Hand and Finger	1	-0.2970	0.0452	-6.5700	0.0001
Sprains/Strains to Lower Body	1	-0.1250	0.0638	-1.9600	0.0500
Knee Disorders	1	0.2310	0.0325	7.1100	0.0001
Neck & Head	1	0.0339	0.0612	0.5600	0.5789
Major Trauma	1 1	0.0791	0.0383 0.1191	2.0700	0.0386
Burns	<u>'</u>	0.2581	0.1191	2.1700	0.0303
Type of Industry					
Mining	1	0.1128	0.0820	1.3800	0.1687
Construction	1	0.0159	0.0269	0.5900	0.5555
Transportation	1	0.0273	0.0355	0.7700	0.4413
Claimant Characteristics		,	,	,	
Male	1	0.0629	0.0239	2.6300	0.0086
Wage (Elasticity)	1	0.0823	0.0205	4.0200	0.0001
Time Sensitive Components		0.0000	0.0000	<b>5 7700</b>	0.0004
Accident Year	1	0.0383	0.0066	5.7700	0.0001
Length to Close (Elasticity)	1	0.7323	0.0195	37.6300	0.0001
Lag to Report Lag to First Indemnity Payment	1 1	-0.0009 -0.0009	0.0002 0.0001	-3.7900 -12.4700	0.0001 0.0001
Lag to First indentifity Payment	<u>'</u>	-0.0009	0.0001	-12.4700	0.0001
Type of Carrier					
Pinnacol Assurance Claim	1	-0.0080	0.0254	-0.3200	0.7526
Self-Insured Claim	1	0.2021	0.0416	4.8600	0.0001
Claim Characteristics (Impact if Yes)					
Claimant Attorney	1	0.1163	0.0266	4.3800	0.0001
Chiropractor Used	1	0.0905	0.0368	2.4600	0.0140
Physical Therapy Used	1	0.2988	0.0212	14.1000	0.0001
Hospital Used	1	0.5793	0.0255	22.7200	0.0001
Vocational Rehabilitation Used	1	0.1645	0.0487	3.3800	0.0007
Surgery Used	1	0.1094	0.0231	4.7300	0.0001
Method to Class (Pass is Classed by Order)					
Method to Close (Base is Closed by Order) Settlement	1	0.1433	0.0433	3.3100	0.0009
Admission	1	-0.0204	0.0433	-0.5100	0.6100
Aumosion	'	-0.0204	0.0000	-0.5100	0.0100
Injury Type (Base is Perm. Partial Unscheduled)					
Permanent Total	1	0.0589	0.1188	0.5000	0.6203
Permanent Partial Schedule	1	-0.0290	0.0251	-1.1600	0.2474
Fatal	1	-0.6663	0.1374	-4.8500	0.0001
Other	1	-0.7717	0.0793	-9.7300	0.0001
Managed Care Techniques					
Early Report	1	-0.0202	0.0238	-0.8500	0.3958
Case Manager	1	0.1344	0.0232	5.8000	0.0001
Utilization Review	1	0.3198	0.0485	6.5900	0.0001
Intercent	4	0.4055	0.0045	0.7000	0.4000
Intercept	1	-0.4955	0.6845	-0.7200	0.4692

 $\label{eq:Model-Natural Logarithm of Total costs as Linear Function} F \ Statistic= 272.09 \ \ Prob > F= 0.0001$ 

 $R^2 = 0.6521$ 

	Degrees of	Parameter	Standard	Т	Significance
Independent Variable	Freedom	Estimate	Error	Statistic	Prob> T
maganaon vanasio	Treedom	Louinato	LIIOI	Otationo	11002[1]
Type of Injury					
Back Sprains and Strains	1	0.2570	0.0260	9.9000	0.0001
All Other Back Injuries	1	0.2927	0.0540	5.4300	0.0001
Intermediate Fractures/Dislocations	1	0.0455	0.0350	1.3000	0.1941
Fractures/Dislocations Hands and Digits	1	-0.2990	0.0369	-8.1100	0.0001
Cut/Laceration/Contusion Hand and Finger	1	-0.5730	0.0369	-15.5400	0.0001
Sprains/Strains to Lower Body	1	-0.0300	0.0520	-0.5800	0.5647
Knee Disorders	1	0.0688	0.0265	2.6000	0.0094
Neck & Head	1	0.1736	0.0499	3.4800	0.0005
Major Trauma	1	0.1533	0.0312	4.9100	0.0001
Burns	1	-0.0338	0.0972	-0.3500	0.7281
Type of Industry					
Mining	1	0.1851	0.0669	2.7700	0.0057
Construction	1	0.1051	0.0009	5.2800	0.0007
Transportation	1	0.1315	0.0220	4.5500	0.0001
•					
Claimant Characteristics		0.4050	0.0405	F 0000	0.0004
Male	1	0.1052	0.0195	5.3900	0.0001
Wage (Elasticity)	1	0.2480	0.0167	14.8400	0.0001
Time Sensitive Components					
Accident Year	1	0.0318	0.0054	5.8600	0.0001
Length to Close (Elasticity)	1	0.7665	0.0159	48.2800	0.0001
Lag to Report	1	-0.0003	0.0002	-1.4700	0.1419
Lag to First Indemnity Payment	1	-0.0008	0.0001	-14.2600	
Type of Carrier					
Pinnacol Assurance Claim	1	0.0018	0.0207	0.0900	0.9307
Self-Insured Claim	1	0.0018	0.0207	4.9100	0.9307
Con modred Claim	<del>† '</del>	0.1007	0.0000	4.5100	0.0001
Claim Characteristics (Impact if Yes)					
Claimant Attorney	1	0.1446	0.0217	6.6700	0.0001
Chiropractor Used	1	0.0942	0.0300	3.1400	0.0017
Physical Therapy Used	1	0.1993	0.0173	11.5300	0.0001
Hospital Used	1	0.3206	0.0208	15.4100	0.0001
Vocational Rehabilitation Used	1	0.3487	0.0398	8.7700	0.0001
Surgery Used	1	0.0618	0.0189	3.2800	0.0011
Method to Close (Base is Closed by Order)					
Settlement	1	0.2726	0.0353	7.7200	0.0001
Admission	1	-0.1859	0.0326	-5.7100	0.0001
Injury Type (Base is Perm. Partial Unscheduled)	4	0.0040	0.0000	6 5500	0.0004
Permanent Total	1 1	0.6346	0.0969	6.5500	0.0001
Permanent Partial Schedule		-0.1664	0.0205	-8.1400	0.0001
Fatal Other	1 1	0.5294 -0.5125	0.1121 0.0647	4.7200 -7.9200	0.0001 0.0001
Outo	'	-0.0120	0.0041	-1.3200	0.0001
Managed Care Techniques					
Early Report	1	-0.0440	0.0194	-2.2600	0.0236
Case Manager	1	0.1600	0.0189	8.4700	0.0001
Utilization Review	1	0.1536	0.0396	3.8800	0.0001
Intercent	1	0.0700	0.5504	0.5000	0.0400
Intercept	1	0.2799	0.5584	0.5000	0.6162

# TABLE 1

# **AVERAGE COSTS**

See Table 8 for 2002 data used in Charts 1a, 1b, and 1c.

Prior Data from 2000 and 2001 Studies.

# TABLE 2

# **CLAIM SIZE**

See Table 9 for 2002 data used in Chart 2.

Prior Data from 2000 and 2001 Studies.

TABLE 3

DISTRIBUTION BY ACCIDENT YEAR AND CARRIER

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					Indemnity					
	Cl	aim Coun	t	& 1	Medical Cos	rt	Aı	verage Cost	per Claim	
Accident	Pinnacol	Comm.	Self	Pinnacol	Comm.	Self	Pinnacol	Comm.	Self	
Year	Assurance	Carrier	Insured	Assurance	Carrier	Insured	Assurance	Carrier	Insured	Total
							(5)/(2)	(6)/(3)	(7)/(4)	
6/91 and prior	0	0	1	0	0	8,005	0	0	8,005	8,005
7/1/91-12/31/91	0	0	1	0	0	358,897	0	0	358,897	358,897
1992	6	1	0	826,178	26,815	0	137,696	26,815	0	121,856
1993	3	5	3	535,622	272,033	196,756	178,541	54,407	65,585	91,310
1994	4	7	1	457,530	735,646	125,410	114,383	105,092	125,410	109,882
1995	9	3	1	1,448,705	928,522	49,878	160,967	309,507	49,878	186,700
1996	20	13	7	1,995,999	1,491,471	269,988	99,800	114,729	38,570	93,936
1997	33	18	15	2,409,632	974,231	739,098	73,019	54,124	49,273	62,469
1998	56	54	22	2,719,573	2,669,214	1,418,878	48,564	49,430	64,494	51,573
1999	116	73	60	4,208,105	1,935,339	1,895,531	36,277	26,511	31,592	32,285
2000	0	0	93	0	0	1,716,221	0	0	18,454	18,454
2001	0	0	5	0	0	53,127	0	0	10,625	10,625
Totals Pre SB 218	0	0	1	0	0	8,005	0	0	8,005	8,005
Totals Post SB 218	247	174	208	14,601,344	9,033,271	6,823,784	59,115	51,915	32,807	48,424
Totals/Average	247	174	210	14,601,344	9,033,271	6,839,794	59,115	51,915	32,570	48,295

**NOTE:** (11) Equals the sum of Cols (5) through (7) divided by the sum of Cols (2) through (4).

### TABLE 4

# METHOD OF CLOSURE

See Table 10 for 2002 data used in Chart 4.

Prior Data from 2000 and 2001 Studies.

TABLE 5

ATTORNEY INVOLVEMENT

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Indemnity	Percent	Average Cost
Claimant Attorney Involvement	of Claims	of Claims	& Medical Cost	of Cost	of Claims
·					(4)/(2)
Pinnacol Assurance					
Claimant Attorney	143	23%	11,367,901	37%	79,496
No Claimant Attorney	104	17%	3,233,443	11%	31,091
Unknown	0	0%	0	0%	
Total	247	39%	14,601,344	48%	59,115
Commercial					
Claimant Attorney	37	6%	2,107,513	7%	56,960
No Claimant Attorney	137	22%	6,925,758	23%	50,553
Unknown	0	0%	0	0%	,
Total	174	28%	9,033,271	30%	51,915
Self Insurer					
Claimant Attorney	72	11%	3,887,798	13%	53,997
No Claimant Attorney	137	22%	2,943,991	10%	21,489
Unknown	0	0%	0	0%	,
Total	209	33%	6,831,789	22%	32,688
All Carriers					
Claimant Attorney	252	40%	17,363,212	57%	68,902
No Claimant Attorney	378	60%	13,103,192	43%	34,665
Unknown	0	0%	0	0%	- ,
Total	630	100%	30,466,404	100%	48,359

# TABLE 6

### CHIROPRACTOR INVOLVEMENT

See Table 17 for 2002 data used in Charts 6c.

Prior Data from 2000 and 2001 Studies.

TABLE 7

DISTRIBUTION BY TYPE OF COST

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Type of Cost	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Total Indemnity	630	100%	18,786,518	59%	29,820
Total Medical	625	99%	11,679,886	37%	18,688
Total Vocational Rehab	19	3%	23,226	0%	1,222
Total Lump Sum Payments	311	49%	4,885,884		15,710
Total Expenses	521	83%	1,348,496	4%	2,588
Totals/Average	630		31,838,126	100%	50,537

Note: Lump Sum Payments not included in Total because they are included in the other amounts.

TABLE 8, SHEET 1

# DISTRIBUTION BY TYPE OF CARRIER TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Type of Carrier	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Pinnacol Assurance	247	39%	15,108,820	47%	61,169
Commercial Insurers	174	28%	9,503,980	30%	54,621
Self Insurers	209	33%	7,225,326	23%	34,571
Totals/Average	630		31,838,126		50,537

# TABLE 8, SHEET 2

# DISTRIBUTION BY TYPE OF CARRIER INDEMNITY DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Carrier	of Claims	of Claims	of Claims
			(3)/(2)
Pinnacol Assurance	247	9,100,221	36,843
Commercial Insurers	174	5,714,179	32,840
Self Insurers	209	3,972,118	19,005
Totals/Average	630	18,786,518	29,820

# TABLE 8, SHEET 3

# DISTRIBUTION BY TYPE OF CARRIER LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Carrier	of Claims	of Claims	of Claims
			(3)/(2)
Pinnacol Assurance	187	2,213,057	11,835
Commercial Insurers	76	1,480,060	19,474
Self Insurers	48	1,192,767	24,849
Totals/Average	311	4,885,884	15,710

TABLE 8, SHEET 4

# DISTRIBUTION BY TYPE OF CARRIER MEDICAL DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Carrier	of Claims	of Claims	of Claims
			(3)/(2)
Pinnacol Assurance	245	5,501,123	22,454
Commercial Insurers	172	3,319,092	19,297
Self Insurers	208	2,859,671	13,748
Totals/Average	625	11,679,886	18,688

# TABLE 8, SHEET 5

# DISTRIBUTION BY TYPE OF CARRIER VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Carrier	of Claims	of Claims	of Claims
			(3)/(2)
Pinnacol Assurance	5	7,812	1,562
Commercial Insurers	7	9,312	1,330
Self Insurers	7	6,102	872
Totals/Average	19	23,226	1,222

TABLE 8, SHEET 6

# DISTRIBUTION BY TYPE OF CARRIER EXPENSE DOLLARS

(1)	(2)	(3)	(4)	
	Number	Dollar Cost	Average Cost	
Type of Carrier	of Claims	of Claims	of Claims	
			(3)/(2)	
Pinnacol Assurance	233	499,664	2,144	
Commercial Insurers	163	461,397	2,831	
Self Insurers	125	387,435	3,099	
Totals/Average	521	1,348,496	2,588	

TABLE 9, SHEET 1 DISTRIBUTION BY SIZE OF CLAIM

(1)		(2)	(3)	(4)	(5)	(6)
Size of Cl	aim	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
·		V	·	·	·	(4)/(2)
Up to	1,000	3	0%	2,356	0%	785
1,001 -	5,000	28	4%	92,276	0%	3,296
5,001 -	10,000	52	8%	383,966	1%	7,384
10,001 -	20,000	122	19%	1,809,252	6%	14,830
20,001 -	30,000	103	16%	2,578,549	8%	25,034
30,001 -	40,000	65	10%	2,223,876	7%	34,213
40,001 -	50,000	54	9%	2,435,923	8%	45,110
50,001 -	60,000	41	7%	2,249,710	7%	54,871
60,001 -	70,000	33	5%	2,143,526	7%	64,955
70,001 -	80,000	27	4%	2,006,015	6%	74,297
80,001 -	90,000	20	3%	1,693,457	5%	84,673
90,001 -	100,000	14	2%	1,334,817	4%	95,344
100,001 -	125,000	31	5%	3,463,013	11%	111,710
125,001 -	150,000	10	2%	1,399,587	4%	139,959
150,001 -	175,000	9	1%	1,468,918	5%	163,213
175,001 -	250,000	7	1%	1,562,867	5%	223,267
250,001 -	400,000	7	1%	2,167,426	7%	309,632
Over	400,000	4	1%	2,822,592	9%	705,648
Totals\Average		630		31,838,126		50,537

TABLE 9, SHEET 2

DISTRIBUTION BY SIZE OF CLAIM - PINNACOL ASSURANCE

(1)		(2)	(3)	(4)	(5)	(6)
Size of C	laim	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(4)/(2)
Up to	1,000	1	0%	1,000	0%	1,000
1,001 -	5,000	5	2%	16,015	0%	3,203
5,001 -	10,000	20	8%	144,835	1%	7,242
10,001 -	20,000	32	13%	507,788	3%	15,868
20,001 -	30,000	39	16%	976,984	6%	25,051
30,001 -	40,000	31	13%	1,072,060	7%	34,583
40,001 -	50,000	22	9%	1,004,169	7%	45,644
50,001 -	60,000	17	7%	940,760	6%	55,339
60,001 -	70,000	15	6%	980,445	6%	65,363
70,001 -	80,000	13	5%	964,080	6%	74,160
80,001 -	90,000	9	4%	762,786	5%	84,754
90,001 -	100,000	6	2%	575,639	4%	95,940
100,001 -	125,000	19	8%	2,129,992	14%	112,105
125,001 -	150,000	4	2%	559,257	4%	139,814
150,001 -	175,000	5	2%	813,119	5%	162,624
175,001 -	250,000	2	1%	416,866	3%	208,433
250,001 -	400,000	4	2%	1,215,259	8%	303,815
Over	400,000	3	1%	2,027,766	13%	675,922
- 4 - 1 - \ A		2.47		15 100 020		61.160

*Totals\Average* 247 15,108,820 61,169

TABLE 9, SHEET 3

DISTRIBUTION BY SIZE OF CLAIM - COMMERCIAL INSURERS

(1)		(2)	(3)	(4)	(5)	(6)
Size of C	'laim	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(4)/(2)
Up to	1,000	1	1%	609	0%	609
1,001 -	5,000	8	5%	26,844	0%	3,356
5,001 -	10,000	5	3%	40,645	0%	8,129
10,001 -	20,000	28	16%	419,609	4%	14,986
20,001 -	30,000	28	16%	715,439	8%	25,551
30,001 -	40,000	21	12%	706,069	7%	33,622
40,001 -	50,000	20	11%	893,354	9%	44,668
50,001 -	60,000	13	7%	703,798	7%	54,138
60,001 -	70,000	12	7%	767,682	8%	63,974
70,001 -	80,000	7	4%	515,409	5%	73,630
80,001 -	90,000	6	3%	511,200	5%	85,200
90,001 -	100,000	6	3%	576,323	6%	96,054
100,001 -	125,000	7	4%	751,813	8%	107,402
125,001 -	150,000	5	3%	694,224	7%	138,845
150,001 -	175,000	2	1%	328,320	3%	164,160
175,001 -	250,000	2	1%	482,598	5%	241,299
250,001 -	400,000	2	1%	575,218	6%	287,609
Over	400,000	1	1%	794,826	8%	794,826
. 7 \ 4		17.4		0.502.000		54.621

 Totals\Average
 174
 9,503,980
 54,621

TABLE 9, SHEET 4

DISTRIBUTION BY SIZE OF CLAIM - SELF INSURERS

(1)		(2)	(3)	(4)	(5)	(6)
Size of C	laim	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(4)/(2)
Up to	1,000	1	0%	747	0%	747
1,001 -	5,000	15	7%	49,417	1%	3,294
5,001 -	10,000	27	13%	198,486	3%	7,351
10,001 -	20,000	62	30%	881,855	12%	14,223
20,001 -	30,000	36	17%	886,126	12%	24,615
30,001 -	40,000	13	6%	445,747	6%	34,288
40,001 -	50,000	12	6%	538,400	7%	44,867
50,001 -	60,000	11	5%	605,152	8%	55,014
60,001 -	70,000	6	3%	395,399	5%	65,900
70,001 -	80,000	7	3%	526,526	7%	75,218
80,001 -	90,000	5	2%	419,471	6%	83,894
90,001 -	100,000	2	1%	182,855	3%	91,428
100,001 -	125,000	5	2%	581,208	8%	116,242
125,001 -	150,000	1	0%	146,106	2%	146,106
150,001 -	175,000	2	1%	327,479	5%	163,740
175,001 -	250,000	3	1%	663,403	9%	221,134
250,001 -	400,000	1	0%	376,949	5%	376,949
Over	400,000	0	0%	0	0%	0
. 7 \ 4		200		7.225.226		24.571

 Totals\Average
 209
 7,225,326
 34,571

TABLE 10, SHEET 1

# DISTRIBUTION BY METHOD OF CLOSURE TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Carrier	Method of Closure	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims (5)/(3)
						(3)7(3)
Pinnacol	Negotiated Settlement	117	47%	10,472,900	69%	89,512
Assurance	Admission	120	49%	4,031,177	27%	33,593
	Order	10	4%	604,743	4%	60,474
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Commercial	Negotiated Settlement	75	43%	5,606,645	59%	74,755
Insurers	Admission	62	36%	2,206,602	23%	35,590
	Order	36	21%	1,683,845	18%	46,773
	Other	1	1%	6,888	0%	6,888
	Not Reported	0	0%	0	0%	
Self	Negotiated Settlement	56	27%	3,541,683	49%	63,244
Insurers	Admission	152	73%	3,637,090	50%	23,928
	Order	1	0%	46,553	1%	46,553
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
All Carriers	Negotiated Settlement	248	39%	19,621,228	62%	79,118
	Admission	334	53%	9,874,869	31%	29,565
	Order	47	7%	2,335,141	7%	49,684
	Other Not Reported	1 0	0% 0%	6,888 0	0% 0%	6,888
Totals/Average	Not Reported	630	0 70	31,838,126	0 /0	50,537

MILLIMAN USA

TABLE 10, SHEET 2

## DISTRIBUTION BY METHOD OF CLOSURE INDEMNITY DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Carrier	Method of Closure	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(5)/(3)
Pinnacol	Negotiated Settlement	117	47%	6,563,801	72%	56,101
Assurance	Admission	120	49%	2,271,395	25%	18,928
	Order	10	4%	265,025	3%	26,503
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Commercial	Negotiated Settlement	75	43%	3,412,250	60%	45,497
Insurers	Admission	62	36%	1,122,859	20%	18,111
	Order	36	21%	1,175,950	21%	32,665
	Other	1	1%	3,120	0%	3,120
	Not Reported	0	0%	0	0%	
Self	Negotiated Settlement	56	27%	2,133,609	54%	38,100
Insurers	Admission	152	73%	1,797,807	45%	11,828
	Order	1	0%	40,702	1%	40,702
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
All Carriers	Negotiated Settlement	248	39%	12,109,660	64%	48,829
	Admission	334	53%	5,192,061	28%	15,545
	Order	47	7%	1,481,677	8%	31,525
	Other Not Reported	1 0	0% 0%	3,120 0	0% 0%	3,120
Totals/Average	Not Nepolieu	630	U /0	18,786,518	U /0	29,820

MILLIMAN USA

TABLE 10, SHEET 3

## DISTRIBUTION BY METHOD OF CLOSURE LUMP SUM DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Carrier	Method of Closure	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(5)/(3)
Pinnacol	Negotiated Settlement	82	44%	1,177,522	53%	14,360
Assurance	Admission	97	52%	896,474	41%	9,242
	Order	8	4%	139,061	6%	17,383
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Commercial	Negotiated Settlement	52	68%	1,112,014	75%	21,385
Insurers	Admission	3	4%	33,000	2%	11,000
	Order	21	28%	335,046	23%	15,955
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Self	Negotiated Settlement	46	96%	1,149,065	96%	24,980
Insurers	Admission	1	2%	3,000	0%	3,000
	Order	1	2%	40,702	3%	40,702
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
All Carriers	Negotiated Settlement	180	58%	3,438,601	70%	19,103
	Admission	101	32%	932,474	19%	9,232
	Order Other	30	10% 0%	514,809	11% 0%	17,160
	Other Not Reported	0 0	0% 0%	0 0	0% 0%	
Totals/Average		311		4,885,884		15,710

MILLIMAN USA

TABLE 10, SHEET 4

## DISTRIBUTION BY METHOD OF CLOSURE MEDICAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Carrier	Method of Closure	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(5)/(3)
Pinnacol	Negotiated Settlement	115	47%	3,528,750	64%	30,685
Assurance	Admission	120	49%	1,661,969	30%	13,850
	Order	10	4%	310,404	6%	31,040
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Commercial	Negotiated Settlement	74	43%	1,898,737	57%	25,659
Insurers	Admission	62	36%	969,429	29%	15,636
	Order	35	20%	447,968	13%	12,799
	Other	1	1%	2,958	0%	2,958
	Not Reported	0	0%	0	0%	
Self	Negotiated Settlement	55	26%	1,073,765	38%	19,523
Insurers	Admission	152	73%	1,780,487	62%	11,714
	Order	1	0%	5,419	0%	5,419
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
All Carriers	Negotiated Settlement	244	39%	6,501,252	56.0%	26,644
	Admission	334	53%	4,411,885	38%	13,209
	Order	46	7%	763,791	7%	16,604
	Other Not Reported	1 0	0% 0%	2,958 0	0% 0%	2,958
Totals/Average	. tot i topoitou	625	<b>5</b> / 0	11,679,886	370	18,688

TABLE 10, SHEET 5

## DISTRIBUTION BY METHOD OF CLOSURE VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Carrier	Method of Closure	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims (5)/(3)
Pinnacol	Negotiated Settlement	5	100%	7,812	100%	1,562
Assurance	Admission	0	0%	0	0%	
	Order	0	0%	0	0%	
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Commercial	Negotiated Settlement	6	86%	8,922	96%	1,487
Insurers	Admission	1	14%	390	4%	390
	Order	0	0%	0	0%	
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Self	Negotiated Settlement	3	43%	3,696	61%	1,232
Insurers	Admission	4	57%	2,406	39%	602
	Order	0	0%	0	0%	
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
All Carriers	Negotiated Settlement	14	74%	20,430	88%	1,459
	Admission	5	26%	2,796	12%	559
	Order Other	0 0	0% 0%	0 0	0% 0%	
	Not Reported	0	0% 0%	0	0% 0%	
Totals/Average		19		23,226		1,222

MILLIMAN USA

TABLE 10, SHEET 6

## DISTRIBUTION BY METHOD OF CLOSURE EXPENSE DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Carrier	Method of Closure	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
						(5)/(3)
Pinnacol	Negotiated Settlement	109	47%	372,537	75%	3,418
Assurance	Admission	114	49%	97,813	20%	858
	Order	10	4%	29,314	6%	2,931
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
Commercial	Negotiated Settlement	70	43%	286,736	62%	4,096
Insurers	Admission	56	34%	113,924	25%	2,034
	Order	36	22%	59,927	13%	1,665
	Other	1	1%	810	0%	810
	Not Reported	0	0%	0	0%	
Self	Negotiated Settlement	53	42%	330,613	85%	6,238
Insurers	Admission	71	57%	56,390	15%	794
	Order	1	1%	432	0%	432
	Other	0	0%	0	0%	
	Not Reported	0	0%	0	0%	
All Carriers	Negotiated Settlement	232	45%	989,886	73%	4,267
	Admission	241	46%	268,127	20%	1,113
	Order	47	9%	89,673	7%	1,908
	Other Not Reported	1 0	0% 0%	810 0	0% 0%	810
Totals/Average	Not iveholied	521	U /0	1,348,496	U /0	2,588

MILLIMAN USA

### TABLE 11, SHEET 1

## DISTRIBUTION BY CAUSE OF INJURY TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Cause of Injury	of Claims	of Claims	of Claims	of Dollars	of Claims
	V	•	v		(4)/(2)
BURN OR SCALD - HEAT OR COI	LD EXPOSU	J <b>RE</b>			
Acid Chemicals	0	0.0%	0	0.0%	
Contact with Hot Objects	1	0.2%	1,356	0.0%	1,356
Temperature Extremes	0	0.0%	0	0.0%	
Fire or Flame	1	0.2%	11,144	0.0%	11,144
Steam or Hot Fluids	0	0.0%	0	0.0%	
Dust, Fumes, Gas, or Vapors	0	0.0%	0	0.0%	
Welding Operations	0	0.0%	0	0.0%	
Radiation	0	0.0%	0	0.0%	
Misc - Burn	0	0.0%	0	0.0%	
SUBTOTAL - BURN	2	0.3%	12,500	0.0%	6,250
CAUGHT IN OR BETWEEN					
Machine or Machinery	7	1.1%	258,144	0.8%	36,878
Object Handled	5	0.8%	39,056	0.1%	7,811
Misc - Caught	8	1.3%	145,622	0.5%	18,203
SUBTOTAL - CAUGHT	20	3.2%	442,822	1.4%	22,141
CUT, PUNCTURE, SCRAPE INJURI	ED BY				
Broken Glass	0	0.0%	0	0.0%	
Hand Tool, Utensil; Not Powered	5	0.8%	86,267	0.3%	17,253
Powered Hand Tool	5	0.8%	216,395	0.7%	43,279
Misc - Cut	7	1.1%	273,049	0.9%	39,007
SUBTOTAL - CUT	17	2.7%	575,711	1.8%	33,865
FALL OR SLIP INJURY					
From a Different Level	26	4.1%	1,326,421	4.2%	51,016
From a Ladder or Scaffolding	25	4.0%	1,554,087	4.9%	62,163
From Liquid or Grease Spills	16	2.5%	1,200,698	3.8%	75,044
On Same Level	18	2.9%	705,347	2.2%	39,186
Slipped, Did Not Fall	10	1.6%	439,489	1.4%	43,949
Misc - Fall/Slip	40	6.3%	1,897,082	6.0%	47,427
SUBTOTAL - FALL/SLIP	135	21.4%	7,123,124	22.4%	52,764
MOTOR VEHICLE					
Collision with Another Vehicle	14	2.2%	996,318	3.1%	71,166
		2.2% 0.2%	66,818	3.1% 0.2%	66,818
Collision with a Fixed Object Crash of Airplane	1 0	0.2% 0.0%	00,818	0.2% 0.0%	00,010
Vehicle Upset	5	0.0%	352,762	0.0% 1.1%	70,552
Misc - Vehicle	5 4	0.8% 0.6%	352,762 896,141	1.1% 2.8%	70,552 224,035
SUBTOTAL - VEHICLE	24	3.8%	2,312,039	7.3%	96,335

TABLE 11, SHEET 1 (CONT'D)

## DISTRIBUTION BY CAUSE OF INJURY TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Cause of Injury	of Claims	of Claims	of Claims	of Dollars	of Claims
January year	- <b>J</b>	<i>y</i>	. <b>,</b>	. <b>,</b>	(4)/(2)
STRAIN OR INJURY BY					
Jumping	1	0.2%	33,948	0.1%	33,948
Holding or Carrying	13	2.1%	574,151	1.8%	44,165
Lifting	83	13.2%	4,469,987	14.0%	53,855
Pushing or Pulling	26	4.1%	1,483,002	4.7%	57,039
Reaching	2	0.3%	74,176	0.2%	37,088
Using Tool or Machine	5	0.8%	117,195	0.4%	23,439
Misc - Strain	88	14.0%	3,695,072	11.6%	41,989
SUBTOTAL - STRAIN	218	34.6%	10,447,531	32.8%	47,924
STRIKING AGAINST OR STEPPING	GON				
Moving Parts of Machine	1	0.2%	43,409	0.1%	43,409
Objects Being Lifted or Handled	5	0.8%	224,047	0.7%	44,809
Sanding, Scraping, Cleaning	0	0.0%	0	0.0%	,
Stationary Object	8	1.3%	261,958	0.8%	32,745
Stepping on Sharp Object	0	0.0%	0	0.0%	<b>,</b>
Misc - Striking Against	5	0.8%	195,612	0.6%	39,122
SUBTOTAL - STRIKING AGAINST	19	3.0%	725,026	2.3%	38,159
STRUCK OR INJURED BY					
Falling or Flying Object	21	3.3%	1,474,942	4.6%	70,235
Hand Tool or Machine in Use	2	0.3%	171,807	0.5%	85,904
Motor Vehicle	5	0.8%	1,355,521	4.3%	271,104
Moving Parts of Machine	2	0.3%	49,437	0.2%	24,719
Objects Being Lifted or Handled	2	0.3%	33,617	0.1%	16,809
Objects Handled by Others	5	0.8%	258,499	0.8%	51,700
Misc - Struck	12	1.9%	705,764	2.2%	58,814
SUBTOTAL - STRUCK	49	<b>7.8%</b>	4,049,587	12.7%	<b>82,645</b>
MICCELL ANEOUS CAUSES					
MISCELLANEOUS CAUSES  Contact with Electric Current	0	0.0%	0	0.0%	
Animal or Insect	0 2	0.0%	0 176,762	0.0% 0.6%	00 201
			•		88,381
Explosion or Flare Back	0	0.0%	0	0.0%	
Foreign Body in Eye	0	0.0%	0 59 207	0.0%	E0 007
Robbery or Criminal Assault	1	0.2%	58,297	0.2%	58,297
Repetitive Motion	25	4.0%	804,584	2.5%	32,183
Cumulative (NOC)	23	3.7%	989,507	3.1%	43,022
Other (NOC)	95 446	15.1%	4,120,636	12.9%	43,375
SUBTOTAL - MISCELLANEOUS	146	23.2%	6,149,786	19.3%	42,122

MILLIMAN USA

31,838,126

50,537

630

Totals/Average

TABLE 11, SHEET 2

## DISTRIBUTION BY CAUSE OF INJURY INDEMNITY DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Cause of Injury	of Claims	of Claims	of Claims	of Dollars	of Claims
<u> </u>	<u> </u>	v	•	•	(4)/(2)
BURN OR SCALD - HEAT OR COL	D EXPOSURE				
Acid Chemicals	0	0.0%	0	0.0%	
Contact with Hot Objects	1	0.2%	764	0.0%	764
Temperature Extremes	0	0.0%	0	0.0%	
Fire or Flame	1	0.2%	8,087	0.0%	8,087
Steam or Hot Fluids	0	0.0%	0	0.0%	
Dust, Fumes, Gas, or Vapors	0	0.0%	0	0.0%	
Welding Operations	0	0.0%	0	0.0%	
Radiation	0	0.0%	0	0.0%	
Misc - Burn	0	0.0%	0	0.0%	
SUBTOTAL - BURN	2	0.3%	8,851	0.0%	4,426
CAUGHT IN OR BETWEEN					
Machine or Machinery	7	1.1%	125,433	0.7%	17,919
Object Handled	5	0.8%	21,925	0.1%	4,385
Misc - Caught	8	1.3%	58,798	0.3%	7,350
SUBTOTAL - CAUGHT	20	3.2%	206,156	1.1%	10,308
CUT, PUNCTURE, SCRAPE INJURE	D RV				
Broken Glass	0	0.0%	0	0.0%	
Hand Tool, Utensil; Not Powered	5	0.8%	39,322	0.2%	7,864
Powered Hand Tool	5	0.8%	109,218	0.6%	21,844
Misc - Cut	7	1.1%	124,593	0.7%	17,799
SUBTOTAL - CUT	17	2.7%	273,133	1.5%	16,067
FALL OR SLIP INJURY  From a Different Level	26	4.1%	828,410	4.4%	31,862
From a Different Level From a Ladder or Scaffolding	26 25	4.1% 4.0%	901,727	4.4% 4.8%	36,069
From Liquid or Grease Spills	25 16	4.0% 2.5%	797,946	4.6% 4.2%	49,872
On Same Level	18	2.9%	406,739	2.2%	22,597
Slipped, Did Not Fall	10	1.6%	223,866	1.2%	22,387
Misc - Fall/Slip	40	6.3%	1,163,752	6.2%	22,367 29,094
SUBTOTAL - FALL/SLIP	135	21.4%	4,322,440	23.0%	<b>32,018</b>
SUDIUIAL - FALL/SLIP	133	Z1.4 <sup>-</sup> /0	4,322,440	23.070	32,010
MOTOR VEHICLE					
Collision with Another Vehicle	14	2.2%	578,441	3.1%	41,317
Collision with a Fixed Object	1	0.2%	37,250	0.2%	37,250
Crash of Airplane	0	0.0%	0	0.0%	
Vehicle Upset	5	0.8%	238,861	1.3%	47,772
Misc - Vehicle	4	0.6%	601,743	3.2%	150,436
SUBTOTAL - VEHICLE	24	3.8%	1,456,295	7.8%	60,679

TABLE 11, SHEET 2 (CONT'D)

## DISTRIBUTION BY CAUSE OF INJURY INDEMNITY DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
(1)	(2) Number	Percent	Dollar Cost	Percent	Average Cost
Cause of Injury	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
STRAIN OR INJURY BY					
Jumping	1	0.2%	13,583	0.1%	13,583
Holding or Carrying	13	2.1%	400,734	2.1%	30,826
Lifting	83	13.2%	2,974,547	15.8%	35,838
Pushing or Pulling	26	4.1%	998,961	5.3%	38,422
Reaching	2	0.3%	39,813	0.2%	19,907
Using Tool or Machine	5	0.8%	70,410	0.4%	14,082
Misc - Strain	88	14.0%	2,055,523	10.9%	23,358
SUBTOTAL - STRAIN	218	34.6%	6,553,571	34.9%	30,062
STRIKING AGAINST OR STEPPING	ON				
Moving Parts of Machine	1	0.2%	11,427	0.1%	11,427
Objects Being Lifted or Handled	5	0.8%	160,840	0.9%	32,168
Sanding, Scraping, Cleaning	0	0.0%	0	0.0%	02,100
Stationary Object	8	1.3%	154,650	0.8%	19,331
Stepping on Sharp Object	Ö	0.0%	0	0.0%	.0,00.
Misc - Striking Against	5	0.8%	149,552	0.8%	29,910
SUBTOTAL - STRIKING AGAINST	19	3.0%	476,469	2.5%	25,077
STRUCK OR INJURED BY	04	0.00/	700 007	4.00/	07.700
Falling or Flying Object	21	3.3%	793,027	4.2%	37,763
Hand Tool or Machine in Use	2	0.3%	132,223	0.7%	66,112
Motor Vehicle	5	0.8%	527,325	2.8%	105,465
Moving Parts of Machine	2	0.3%	17,475	0.1%	8,738
Objects Being Lifted or Handled	2	0.3%	27,457	0.1%	13,729
Objects Handled by Others	5	0.8%	130,184	0.7%	26,037
Misc - Struck	12	1.9%	413,926	2.2%	34,494
SUBTOTAL - STRUCK	49	7.8%	2,041,617	10.9%	41,666
MISCELLANEOUS CAUSES					
Contact with Electric Current	0	0.0%	0	0.0%	
Animal or Insect	2	0.3%	105,752	0.6%	52,876
Explosion or Flare Back	0	0.0%	0	0.0%	
Foreign Body in Eye	0	0.0%	0	0.0%	
Robbery or Criminal Assault	1	0.2%	14,187	0.1%	14,187
Repetitive Motion	25	4.0%	454,456	2.4%	18,178
Cumulative (NOC)	23	3.7%	633,746	3.4%	27,554
Other (NOC)	95	15.1%	2,239,845	11.9%	23,577
SUBTOTAL - MISCELLANEOUS	146	23.2%	3,447,986	18.4%	23,616
Totals/Average	630		18,786,518		29,820

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### TABLE 11, SHEET 3

## DISTRIBUTION BY CAUSE OF INJURY LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Cause of Injury	of Claims	of Claims	of Claims
Cause of Injury	oj Ciaims	oj Ciams	$\frac{6f \text{ Cidims}}{(3)/(2)}$
BURN OR SCALD - HEAT OR COLD EX	POSURE		(-), (-)
Acid Chemicals	0	0	
Contact with Hot Objects	1	250	250
Temperature Extremes	0	0	200
Fire or Flame	Ō	0	
Steam or Hot Fluids	Ō	0	
Dust, Fumes, Gas, or Vapors	Ö	0	
Welding Operations	0	0	
Radiation	0	0	
Misc - Burn	0	0	
SUBTOTAL - BURN	1	<b>250</b>	250
Sobioini - Buri	•	200	250
CAUGHT IN OR BETWEEN			
Machine or Machinery	5	32,672	6,534
Object Handled	1	914	914
Misc - Caught	5	19,793	3,959
SUBTOTAL - CAUGHT	11	53,379	4,853
CUT, PUNCTURE, SCRAPE INJURED BY	7		
Broken Glass	0	0	
Hand Tool, Utensil; Not Powered	1	15,000	15,000
Powered Hand Tool	3	31,243	10,414
Misc - Cut	4	37,660	9,415
SUBTOTAL - CUT	8	83,903	10,488
FALL OR SLIP INJURY			
From a Different Level	14	140,513	10,037
From a Ladder or Scaffolding	19	275,366	14,493
From Liquid or Grease Spills	12	238,321	19,860
On Same Level	6	85,509	14,252
Slipped, Did Not Fall	5	73,035	14,607
Misc - Fall/Slip	23	376,548	16,372
SUBTOTAL - FALL/SLIP	79	1,189,292	15,054
MOTOR VEHICLE			
Collision with Another Vehicle	5	150,666	30,133
Collision with a Fixed Object	1	5,500	5,500
Crash of Airplane	0	0,500	3,300
Vehicle Upset	5	105,893	21,179
Misc - Vehicle	2	99,365	49,683
IVIIOU VEITICIE	_	55,505	+3,003

TABLE 11, SHEET 3 (CONT'D)

## DISTRIBUTION BY CAUSE OF INJURY LUMP SUM DOLLARS

LOMI	SUM DULLE	IND	
(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Cause of Injury	of Claims	of Claims	of Claims
Course of Injury	oj etams	oj etams	(3)/(2)
STRAIN OR INJURY BY			(5), (2)
Jumping	0	0	
Holding or Carrying	7	123,487	17,641
Lifting	48	667,877	13,914
Pushing or Pulling	7	221,632	31,662
Reaching	2	15,093	7,547
Using Tool or Machine	1	7,500	7,500
Misc - Strain	42	650,454	15,487
SUBTOTAL - STRAIN	107	1,686,043	15,757
STRIKING AGAINST OR STEPPING ON			
Moving Parts of Machine	0	0	
Objects Being Lifted or Handled	1	25,000	25,000
Sanding, Scraping, Cleaning	0	25,000	23,000
Stationary Object	3	51,104	17,035
Stepping on Sharp Object	0	0	17,000
Misc - Striking Against	3	46,314	15,438
SUBTOTAL - STRIKING AGAINST	7	122,418	17,488
STRUCK OR INJURED BY			
Falling or Flying Object	7	166,398	23,771
Hand Tool or Machine in Use	2	36,963	18,482
Motor Vehicle	3	109,061	36,354
Moving Parts of Machine	1	106	106
Objects Being Lifted or Handled	0	0	100
Objects Handled by Others	3	36,179	12,060
Misc - Struck	4	187,682	46,921
SUBTOTAL - STRUCK	20	536,389	26,819
MISCELLANEOUS CAUSES			
Contact with Electric Current	0	0	
Animal or Insect	1	5,000	5,000
Explosion or Flare Back	0	0,000	0,000
Foreign Body in Eye	Ö	Ő	
Robbery or Criminal Assault	1	980	980
Repetitive Motion	12	176,691	14,724
Cumulative (NOC)	10	95,594	9,559
Other (NOC)	41	574,521	14,013
SUBTOTAL - MISCELLANEOUS	65	852,786	13,120
T . 1 /4	211	4.007.004	15.710
Totals/Average	311	4,885,884	15,710

### TABLE 11, SHEET 4

## DISTRIBUTION BY CAUSE OF INJURY MEDICAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Cause of Injury	of Claims	of Claims	of Claims	of Dollars	of Claims
V V V		v	•	V	(4)/(2)
BURN OR SCALD - HEAT OR COL	D EXPOSU	JRE			
Acid Chemicals	0	0.0%	0	0.0%	
Contact with Hot Objects	1	0.2%	364	0.0%	364
Temperature Extremes	0	0.0%	0	0.0%	
Fire or Flame	1	0.2%	3,051	0.0%	3,051
Steam or Hot Fluids	0	0.0%	0	0.0%	
Dust, Fumes, Gas, or Vapors	0	0.0%	0	0.0%	
Welding Operations	0	0.0%	0	0.0%	
Radiation	0	0.0%	0	0.0%	
Misc - Burn	0	0.0%	0	0.0%	
SUBTOTAL - BURN	2	0.3%	3,415	0.0%	1,708
CAUGHT IN OR BETWEEN					
Machine or Machinery	7	1.1%	129,216	1.1%	18,459
Object Handled	5	0.8%	15,576	0.1%	3,115
Misc - Caught	8	1.3%	75,408	0.6%	9,426
SUBTOTAL - CAUGHT	20	3.2%	220,200	1.9%	11,010
CUT, PUNCTURE, SCRAPE INJURE	D BY				
Broken Glass	0	0.0%	0	0.0%	
Hand Tool, Utensil; Not Powered	5	0.8%	44,452	0.4%	8,890
Powered Hand Tool	5	0.8%	99,050	0.8%	19,810
Misc - Cut	7	1.1%	138,302	1.2%	19,757
SUBTOTAL - CUT	17	2.7%	281,804	2.4%	16,577
FALL OR SLIP INJURY					
From a Different Level	26	4.2%	442,671	3.8%	17,026
From a Ladder or Scaffolding	24	3.8%	607,634	5.2%	25,318
From Liquid or Grease Spills	16	2.6%	348,694	3.0%	21,793
On Same Level	18	2.9%	271,355	2.3%	15,075
Slipped, Did Not Fall	10	1.6%	158,427	1.4%	15,843
Misc - Fall/Slip	40	6.4%	675,748	5.8%	16,894
SUBTOTAL - FALL/SLIP	134	21.4%	2,504,529	21.4%	18,691
MOTOR VEHICLE					
Collision with Another Vehicle	14	2.2%	380,896	3.3%	27,207
Collision with a Fixed Object	1	0.2%	25,795	0.2%	25,795
Crash of Airplane	0	0.2 %	25,795	0.0%	23,133
Vehicle Upset	5	0.8%	99,975	0.9%	19,995
Misc - Vehicle	4	0.6%	276,637	2.4%	69,159
SUBTOTAL - VEHICLE	24	3.8%	<b>783,303</b>	6.7%	<b>32,638</b>

TABLE 11, SHEET 4 (CONT'D)

## DISTRIBUTION BY CAUSE OF INJURY MEDICAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Cause of Injury	of Claims	of Claims	of Claims	of Dollars	of Claims
<i>y y</i>		J	J	J	(4)/(2)
STRAIN OR INJURY BY					
Jumping	1	0.2%	19,706	0.2%	19,706
Holding or Carrying	12	1.9%	147,030	1.3%	12,253
Lifting	81	13.0%	1,351,841	11.6%	16,689
Pushing or Pulling	26	4.2%	427,057	3.7%	16,425
Reaching	2	0.3%	29,937	0.3%	14,969
Using Tool or Machine	5	0.8%	39,987	0.3%	7,997
Misc - Strain	88	14.1%	1,466,305	12.6%	16,663
SUBTOTAL - STRAIN	215	34.4%	3,481,863	29.8%	16,195
CEDIVING A CAINCE OD CEEDDING	CON				
STRIKING AGAINST OR STEPPING Moving Parts of Machine	3 ON 1	0.2%	27,298	0.2%	27,298
Objects Being Lifted or Handled	5	0.2 %	58,373	0.5%	11,675
Sanding, Scraping, Cleaning		0.0%	0	0.0%	11,075
	0	1.3%	_		10.050
Stationary Object	8		82,002	0.7%	10,250
Stepping on Sharp Object	0	0.0%	0	0.0%	7 4 7 4
Misc - Striking Against	5	0.8%	35,870	0.3%	7,174
SUBTOTAL - STRIKING AGAINST	19	3.0%	203,543	1.7%	10,713
STRUCK OR INJURED BY					
Falling or Flying Object	21	3.4%	628,717	5.4%	29,939
Hand Tool or Machine in Use	2	0.3%	39,021	0.3%	19,511
Motor Vehicle	5	0.8%	770,672	6.6%	154,134
Moving Parts of Machine	2	0.3%	31,623	0.3%	15,812
Objects Being Lifted or Handled	2	0.3%	6,053	0.1%	3,027
Objects Handled by Others	5	0.8%	96,095	0.8%	19,219
, Misc - Struck	12	1.9%	267,419	2.3%	22,285
SUBTOTAL - STRUCK	49	7.8%	1,839,600	15.8%	37,543
MISCELLANEOUS CAUSES					
Contact with Electric Current	0	0.0%	0	0.0%	
Animal or Insect	2	0.0%	62,579	0.5%	31,290
Explosion or Flare Back	0		02,579		31,290
•	•	0.0%	•	0.0%	
Foreign Body in Eye	0	0.0%	0 42 706	0.0%	40 706
Robbery or Criminal Assault	1	0.2%	43,706	0.4%	43,706
Repetitive Motion	25	4.0%	282,215	2.4%	11,289
Cumulative (NOC)	23	3.7%	291,842	2.5%	12,689
Other (NOC)	94	15.0%	1,681,287	14.4%	17,886
SUBTOTAL - MISCELLANEOUS	145	23.2%	2,361,629	20.2%	16,287

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11,679,886

18,688

625

Totals/Average

### TABLE 11, SHEET 5

## DISTRIBUTION BY CAUSE OF INJURY VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Cause of Injury	of Claims	of Claims	of Claims
	J	y	(3)/(2)
BURN OR SCALD - HEAT OR COLD EX	POSURE		
Acid Chemicals	0	0	
Contact with Hot Objects	0	0	
Temperature Extremes	0	0	
Fire or Flame	0	0	
Steam or Hot Fluids	0	0	
Dust, Fumes, Gas, or Vapors	0	0	
Welding Operations	0	0	
Radiation	0	0	
Misc - Burn	0	0	
SUBTOTAL - BURN	0	0	
CAUGHT IN OR BETWEEN			
Machine or Machinery	0	0	
Object Handled	0	0	
Misc - Caught	0	0	
SUBTOTAL - CAUGHT	0	0	
CUT, PUNCTURE, SCRAPE INJURED BY			
Broken Glass	0	0	
Hand Tool, Utensil; Not Powered	Ö	0	
Powered Hand Tool	0	0	
Misc - Cut	Ö	0	
SUBTOTAL - CUT	Ö	Ŏ	
FALL OR SLIP INJURY			
From a Different Level	0	0	
From a Ladder or Scaffolding	0	0	
From Liquid or Grease Spills	1	1,127	1,127
On Same Level	0	0	1,121
Slipped, Did Not Fall	Ö	0	
Misc - Fall/Slip	2	3,535	1,768
SUBTOTAL - FALL/SLIP	3	4,662	1,554
MOTOR VEHICLE			
Collision with Another Vehicle	0	0	
Collision with a Fixed Object	0	0	
Crash of Airplane	0	0	
Vehicle Upset	0	0	
Misc - Vehicle	0	0	
SUBTOTAL - VEHICLE	0	0	

TABLE 11, SHEET 5 (CONT'D)

### DISTRIBUTION BY CAUSE OF INJURY **VOCATIONAL REHAB DOLLARS**

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Cause of Injury	of Claims	of Claims	of Claims
			(3)/(2)
STRAIN OR INJURY BY			
Jumping	0	0	
Holding or Carrying	0	0	
Lifting	0	0	
Pushing or Pulling	0	0	
Reaching	0	0	
Using Tool or Machine	0	0	
Misc - Strain	6	6,828	1,138
SUBTOTAL - STRAIN	6	6,828	1,138
STRIKING AGAINST OR STEPPING ON			
Moving Parts of Machine	0	0	
Objects Being Lifted or Handled	0	0	
Sanding, Scraping, Cleaning	0	0	
Stationary Object	1	2,568	2,568
Stepping on Sharp Object	0	0	
Misc - Striking Against	0	0	
SUBTOTAL - STRIKING AGAINST	1	2,568	2,568
STRUCK OR INJURED BY			
Falling or Flying Object	1	3,330	3,330
Hand Tool or Machine in Use	0	0	-,
Motor Vehicle	0	0	
Moving Parts of Machine	0	0	
Objects Being Lifted or Handled	0	0	
Objects Handled by Others	0	0	
Misc - Struck	0	0	
SUBTOTAL - STRUCK	1	3,330	3,330
MISCELLANEOUS CAUSES			
Contact with Electric Current	0	0	
Animal or Insect	0	0	
Explosion or Flare Back	0	0	
Foreign Body in Eye	0	0	
Robbery or Criminal Assault	0	0	
Repetitive Motion	3	1,813	604
Cumulative (NOC)	1	1,670	1,670
Other (NOC)	4	2,355	589
SUBTOTAL - MISCELLANEOUS	8	5,838	730
Totals/Average	19	23,226	1,222

TABLE 11, SHEET 6

## DISTRIBUTION BY CAUSE OF INJURY EXPENSE DOLLARS

	SE DOLLA		
(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Cause of Injury	of Claims	of Claims	of Claims
Cause of Infairy	oj Ciainis	oj Ciainis	$\frac{0 \text{ Citains}}{(3)/(2)}$
BURN OR SCALD - HEAT OR COLD EX	VDOCIDE		(2)/(2)
Acid Chemicals	0	0	
Contact with Hot Objects	1	228	228
Temperature Extremes	0	0	220
Fire or Flame	1	6	6
Steam or Hot Fluids	0	0	O
Dust, Fumes, Gas, or Vapors	0	0	
Welding Operations	0	0	
Radiation	Ö	0	
Misc - Burn	0	0	
SUBTOTAL - BURN	2	234	117
Septotile beaut	_		• • • • • • • • • • • • • • • • • • • •
CAUGHT IN OR BETWEEN			
Machine or Machinery	6	3,495	583
Object Handled	4	1,555	389
Misc - Caught	6	11,416	1,903
SUBTOTAL - CAUGHT	16	16,466	1,029
CUT, PUNCTURE, SCRAPE INJURED B	Y		
Broken Glass	0	0	
Hand Tool, Utensil; Not Powered	3	2,493	831
Powered Hand Tool	4	8,127	2,032
Misc - Cut	6	10,154	1,692
SUBTOTAL - CUT	13	20,774	1,598
FALL OR SLIP INJURY			
From a Different Level	21	55,340	2,635
From a Ladder or Scaffolding	24	44,726	1,864
From Liquid or Grease Spills	16	52,931	3,308
On Same Level	17	27,253	1,603
Slipped, Did Not Fall	8	57,196	7,150
Misc - Fall/Slip	33	54,047	1,638
SUBTOTAL - FALL/SLIP	119	291,493	2,450
MOTOR VEHICLE			
Collision with Another Vehicle	8	36,981	4,623
Collision with a Fixed Object	1	3,773	3,773
Crash of Airplane	0	0	0,110
Vehicle Upset	5	13,926	2,785
Misc - Vehicle	3	17,761	5,920
SUBTOTAL - VEHICLE	17	<b>72,441</b>	4,261
SOBIOTAL - VEHICLE	• • •	· <u>~</u> , ~~ ·	7,201

TABLE 11, SHEET 6 (CONT'D)

## DISTRIBUTION BY CAUSE OF INJURY EXPENSE DOLLARS

(7)	(2)	(2)	7.43
(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Cause of Injury	of Claims	of Claims	of Claims
			(3)/(2)
STRAIN OR INJURY BY			
Jumping	1	659	659
Holding or Carrying	10	26,387	2,639
Lifting	75	143,599	1,915
Pushing or Pulling	20	56,984	2,849
Reaching	2	4,426	2,213
Using Tool or Machine	3	6,798	2,266
Misc - Strain	70	166,416	2,377
SUBTOTAL - STRAIN	181	405,269	2,239
STRIKING AGAINST OR STEPPING ON			
Moving Parts of Machine	1	4,684	4,684
Objects Being Lifted or Handled	4	4,834	1,209
Sanding, Scraping, Cleaning	0	0	
Stationary Object	7	22,738	3,248
Stepping on Sharp Object	0	0	
Misc - Striking Against	4	10,190	2,548
SUBTOTAL - STRIKING AGAINST	16	42,446	2,653
STRUCK OR INJURED BY			
Falling or Flying Object	16	49,868	3,117
Hand Tool or Machine in Use	2	563	282
Motor Vehicle	5	57,524	11,505
Moving Parts of Machine	2	339	170
Objects Being Lifted or Handled	1	107	107
Objects Handled by Others	5	32,220	6,444
Misc - Struck	10	24,419	2,442
SUBTOTAL - STRUCK	41	165,040	4,025
MISCELLANEOUS CAUSES			
Contact with Electric Current	0	0	
Animal or Insect	2	8,431	4,216
Explosion or Flare Back	0	0	, -
Foreign Body in Eye	0	0	
Robbery or Criminal Assault	1	404	404
Repetitive Motion	22	66,100	3,005
Cumulative (NOC)	16	62,249	3,891
Other (NOC)	75	197,149	2,629
SUBTOTAL - MISCELLANEOUS	116	334,333	2,882
Totala/Assauras	521	1 249 406	2 500
Totals/Average	521	1,348,496	2,588

TABLE 12, SHEET 1

## DISTRIBUTION BY NATURE OF INJURY TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Type of Cost	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
SPECIFIC INJURY					
Amputation	5	0.8%	112,103	0.4%	22,421
Angina Pectoris	0	0.0%	0	0.0%	
Burn	1	0.2%	11,144	0.0%	11,144
Concussion	4	0.6%	731,554	2.3%	182,889
Contusion	58	9.3%	2,599,730	8.3%	44,823
Crushing	1	0.2%	15,693	0.1%	15,693
Dislocation	4	0.6%	76,452	0.2%	19,113
Electric Shock	0	0.0%	0	0.0%	
Enucleation	0	0.0%	0	0.0%	
Foreign body	1	0.2%	26,815	0.1%	26,815
Fracture	61	9.8%	3,004,435	9.6%	49,253
Freezing	0	0.0%	0	0.0%	
Hearing Loss	1	0.2%	4,681	0.0%	4,681
Heat Prostration	0	0.0%	0	0.0%	
Hernia	7	1.1%	271,118	0.9%	38,731
Infection	2	0.3%	120,078	0.4%	60,039
Inflammation	10	1.6%	545,395	1.7%	54,540
Laceration	17	2.7%	358,333	1.1%	21,078
Myocardial Infarction	0	0.0%	0	0.0%	·
Poisoning General	0	0.0%	0	0.0%	
Puncture	5	0.8%	103,596	0.3%	20,719
Rupture	28	4.5%	1,724,619	5.5%	61,594
Severance	7	1.1%	379,691	1.2%	54,242
Sprain	28	4.5%	1,611,474	5.2%	57,553
Strain	260	41.6%	12,327,989	39.5%	47,415
Syncope	1	0.2%	17,365	0.1%	17,365
Asphyxiation	0	0.0%	0	0.0%	,
Vascular Loss	0	0.0%	0	0.0%	
Vision Loss	0	0.0%	0	0.0%	
All Other	93	14.9%	5,759,011	18.4%	61,925

TABLE 12, SHEET 1 (CONT'D)

# DISTRIBUTION BY NATURE OF INJURY TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Type of Cost	of Claims	of Claims	of Claims	of Dollars	of Claims
J. J	.,	.,		<i>y</i>	(4)/(2)
OCCUPATIONAL DISEASE OR CUMULATIVE INJURY	Y				
Dust Disease NOC	0	0.0%	0	0.0%	
Asbestosis	0	0.0%	0	0.0%	
Black Lung	0	0.0%	0	0.0%	
Byssinosis	0	0.0%	0	0.0%	
Silicosis	0	0.0%	0	0.0%	
Respiratory Disorders	0	0.0%	0	0.0%	
Poisoning - Chemical	0	0.0%	0	0.0%	
Poisoning - Metal	0	0.0%	0	0.0%	
Dermatitis	0	0.0%	0	0.0%	
Mental Disorder	0	0.0%	0	0.0%	
Radiation	0	0.0%	0	0.0%	
All Other Occupational Disease	1	0.2%	6,464	0.0%	6,464
Loss of Hearing	3	0.5%	22,671	0.1%	7,557
Contagious Disease	0	0.0%	0	0.0%	
Cancer	0	0.0%	0	0.0%	
AIDS	0	0.0%	0	0.0%	
VDT-Related Disease	0	0.0%	0	0.0%	
Mental Stress	0	0.0%	0	0.0%	
Carpal Tunnel Syndrome	13	2.1%	719,438	2.3%	55,341
All Other Cumulative Injuries	14	2.2%	690,411	2.2%	49,315
Totals/Average	625		31,240,260		49,984

MILLIMAN USA

TABLE 12, SHEET 2

## DISTRIBUTION BY NATURE OF INJURY INDEMNITY DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
	V	V	(3)/(2)
SPECIFIC INJURY			
Amputation	5	55,098	11,020
Angina Pectoris	0	0	
Burn	1	8,087	8,087
Concussion	4	455,392	113,848
Contusion	58	1,586,426	27,352
Crushing	1	6,785	6,785
Dislocation	4	15,583	3,896
Electric Shock	0	0	
Enucleation	0	0	
Foreign body	1	4,972	4,972
Fracture	61	1,664,188	27,282
Freezing	0	0	·
Hearing Loss	1	4,159	4,159
Heat Prostration	0	0	·
Hernia	7	131,149	18,736
Infection	2	48,864	24,432
Inflammation	10	215,227	21,523
Laceration	17	183,590	10,799
Myocardial Infarction	0	0	•
Poisoning General	0	0	
Puncture	5	31,061	6,212
Rupture	28	942,583	33,664
Severance	7	190,031	27,147
Sprain	28	1,092,351	39,013
Strain	260	7,850,104	30,193
Syncope	1	13,841	13,841
Asphyxiation	0	0	•
Vascular Loss	0	0	
Vision Loss	0	0	
All Other	93	3,106,795	33,406

TABLE 12, SHEET 2 (CONT'D)

# DISTRIBUTION BY NATURE OF INJURY INDEMNITY DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
			(3)/(2)
OCCUPATIONAL DISEASE OR CUMULATIVE INJURY			
Dust Disease NOC	0	0	
Asbestosis	0	0	
Black Lung	0	0	
Byssinosis	0	0	
Silicosis	0	0	
Respiratory Disorders	0	0	
Poisoning - Chemical	0	0	
Poisoning - Metal	0	0	
Dermatitis	0	0	
Mental Disorder	0	0	
Radiation	0	0	
All Other Occupational Disease	1	1,560	1,560
Loss of Hearing	3	9,042	3,014
Contagious Disease	0	0	
Cancer	0	0	
AIDS	0	0	
VDT-Related Disease	0	0	
Mental Stress	0	0	
Carpal Tunnel Syndrome	13	405,903	31,223
All Other Cumulative Injuries	14	428,914	30,637
Totals/Average	625	18,451,705	29,523

TABLE 12, SHEET 3

## DISTRIBUTION BY NATURE OF INJURY LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
			(3)/(2)
SPECIFIC INJURY			
Amputation	3	5,754	1,918
Angina Pectoris	0	0	
Burn	0	0	
Concussion	2	130,765	65,383
Contusion	30	365,645	12,188
Crushing	1	2,932	2,932
Dislocation	2	6,685	3,343
Electric Shock	0	0	
Enucleation	0	0	
Foreign body	0	0	
Fracture	37	382,557	10,339
Freezing	0	0	•
Hearing Loss	0	0	
Heat Prostration	0	0	
Hernia	1	10,000	10,000
Infection	1	675	675
Inflammation	5	54,379	10,876
Laceration	5	56,802	11,360
Myocardial Infarction	Õ	0	, 5 5 5
Poisoning General			
Puncture	1	2,225	2,225
Rupture	21	350,589	16,695
Severance	3	8,327	2,776
Sprain	20	534,409	26,720
Strain	127	2,005,514	15,791
Syncope	0	0	10,751
Asphyxiation	0	0	
Vascular Loss	0	0	
Vascular Loss Vision Loss	0	0	
			00.050
All Other	35	701,739	20,050

TABLE 12, SHEET 3 (CONT'D)

# DISTRIBUTION BY NATURE OF INJURY LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
VI V	<i>J</i>	J	(3)/(2)
OCCUPATIONAL DISEASE OR CUMULATIVE INJURY	7		
Dust Disease NOC	0	0	
Asbestosis	0	0	
Black Lung	0	0	
Byssinosis	0	0	
Silicosis	0	0	
Respiratory Disorders	0	0	
Poisoning - Chemical	0	0	
Poisoning - Metal	0	0	
Dermatitis	0	0	
Mental Disorder	0	0	
Radiation	0	0	
All Other Occupational Disease	1	1,560	1,560
Loss of Hearing	0	0	
Contagious Disease	0	0	
Cancer	0	0	
AIDS	0	0	
VDT-Related Disease	0	0	
Mental Stress	0	0	
Carpal Tunnel Syndrome	5	81,804	16,361
All Other Cumulative Injuries	8	43,523	5,440
Totals/Average	308	4,745,884	15,409

TABLE 12, SHEET 4

## DISTRIBUTION BY NATURE OF INJURY MEDICAL DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
	<i>y</i>	J	(3)/(2)
SPECIFIC INJURY			
Amputation	5	49,819	9,964
Angina Pectoris	0	0	
Burn	1	3,051	3,051
Concussion	4	229,490	57,373
Contusion	58	886,399	15,283
Crushing	1	8,537	8,537
Dislocation	4	58,049	14,512
Electric Shock	0	0	
Enucleation	0	0	
Foreign body	1	21,843	21,843
Fracture	61	1,258,527	20,632
Freezing	0	0	
Hearing Loss	1	519	519
Heat Prostration	0	0	
Hernia	7	123,653	17,665
Infection	2	69,924	34,962
Inflammation	10	320,804	32,080
Laceration	17	162,276	9,546
Myocardial Infarction	0	, O	,
Poisoning General	0	0	
Puncture	5	67,049	13,410
Rupture	28	709,160	25,327
Severance	7	179,040	25,577
Sprain	28	451,750	16,134
Strain	258	3,961,518	15,355
Syncope	1	3,524	3,524
Asphyxiation	0	0	,
Vascular Loss	0	0	
Vision Loss	0	0	
All Other	90	2,373,313	26,370

TABLE 12, SHEET 4 (CONT'D)

# DISTRIBUTION BY NATURE OF INJURY MEDICAL DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
OCCUPATIONAL DISEASE OR CUMULATIVE INJUR	v	v	(3)/(2)
Dust Disease NOC	0	0	
Asbestosis	0	0	
Black Lung	0	0	
Byssinosis	0	0	
Silicosis	0	0	
Respiratory Disorders	0	0	
Poisoning - Chemical	0	0	
Poisoning - Metal	0	0	
Dermatitis	0	0	
Mental Disorder	0	0	
Radiation	0	0	
All Other Occupational Disease	1	3,434	3,434
Loss of Hearing	3	13,520	4,507
Contagious Disease	0	0	4,007
Cancer	0	0	
AIDS	0	0	
VDT-Related Disease	0	0	
Mental Stress	0	0	
Carpal Tunnel Syndrome	13	272,389	20,953
All Other Cumulative Injuries	14	217,600	15,543
Totals/Average	620	11,445,188	18,460

TABLE 12, SHEET 5

## DISTRIBUTION BY NATURE OF INJURY VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
	*	·	(3)/(2)
SPECIFIC INJURY			
Amputation	0	0	
Angina Pectoris	0	0	
Burn	0	0	
Concussion	1	570	570
Contusion	1	2,568	2,568
Crushing	0	0	
Dislocation	0	0	
Electric Shock	0	0	
Enucleation	0	0	
Foreign body	0	0	
Fracture	0	0	
Freezing	0	0	
Hearing Loss	0	0	
Heat Prostration	0	0	
Hernia	0	0	
Infection	0	0	
Inflammation	0	0	
Laceration	0	0	
Myocardial Infarction	0	0	
Poisoning General	0	0	
Puncture	0	0	
Rupture	1	96	96
Severance	0	0	
Sprain	1	1,875	1,875
Strain	4	4,725	1,181
Syncope	0	0	•
Asphyxiation	0	0	
Vascular Loss	0	0	
Vision Loss	0	0	
All Other	9	11,875	1,319

TABLE 12, SHEET 5 (CONT'D)

# DISTRIBUTION BY NATURE OF INJURY VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
		,	(3)/(2)
OCCUPATIONAL DISEASE OR CUMULATIVE INJURY			
Dust Disease NOC	0	0	
Asbestosis	0	0	
Black Lung	0	0	
Byssinosis	0	0	
Silicosis	0	0	
Respiratory Disorders	0	0	
Poisoning - Chemical	0	0	
Poisoning - Metal	0	0	
Dermatitis	0	0	
Mental Disorder	0	0	
Radiation	0	0	
All Other Occupational Disease	0	0	
Loss of Hearing	0	0	
Contagious Disease	0	0	
Cancer	0	0	
AIDS	0	0	
VDT-Related Disease	0	0	
Mental Stress	0	0	
Carpal Tunnel Syndrome	2	1,517	759
All Other Cumulative Injuries	0	0	
Totals/Average	19	23,226	1,222

TABLE 12, SHEET 6

## DISTRIBUTION BY NATURE OF INJURY EXPENSE DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
	V	,	(3)/(2)
SPECIFIC INJURY			
Amputation	5	7,186	1,437
Angina Pectoris	0	0	
Burn	1	6	6
Concussion	4	46,102	11,526
Contusion	52	124,337	2,391
Crushing	1	371	371
Dislocation	3	2,820	940
Electric Shock	0	0	
Enucleation	0	0	
Foreign body	0	0	
Fracture	56	81,720	1,459
Freezing	0	0	
Hearing Loss	1	3	3
Heat Prostration	0	0	
Hernia	7	16,316	2,331
Infection	1	1,290	1,290
Inflammation	8	9,364	1,171
Laceration	10	12,467	1,247
Myocardial Infarction	0	0	
Poisoning General	0	0	
Puncture	3	5,486	1,829
Rupture	27	72,780	2,696
Severance	6	10,620	1,770
Sprain	26	65,498	2,519
Strain	216	511,642	2,369
Syncope	0	0	
Asphyxiation	0	0	
Vascular Loss	0	0	
Vision Loss	0	0	
All Other	67	267,028	3,985

TABLE 12, SHEET 6 (CONT'D)

# DISTRIBUTION BY NATURE OF INJURY EXPENSE DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Cost	of Claims	of Claims	of Claims
Jr. J.	<i>y</i>		(3)/(2)
OCCUPATIONAL DISEASE OR CUMULATIVE INJURY	Y		
Dust Disease NOC	0	0	
Asbestosis	0	0	
Black Lung	0	0	
Byssinosis	0	0	
Silicosis	0	0	
Respiratory Disorders	0	0	
Poisoning - Chemical	0	0	
Poisoning - Metal	0	0	
Dermatitis	0	0	
Mental Disorder	0	0	
Radiation	0	0	
All Other Occupational Disease	1	1,470	1,470
Loss of Hearing	1	109	109
Contagious Disease	0	0	
Cancer	0	0	
AIDS	0	0	
VDT-Related Disease	0	0	
Mental Stress	0	0	
Carpal Tunnel Syndrome	9	39,629	4,403
All Other Cumulative Injuries	13	43,897	3,377
Totals/Average	518	1,320,141	2,549

TABLE 13, SHEET 1

### DISTRIBUTION BY PART OF BODY TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Part of Body	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Head	27	4.3%	1,850,154	5.9%	68,524
Neck	20	3.2%	1,825,739	5.8%	91,287
Upper Extremities	195	31.4%	7,717,894	24.5%	39,579
Trunk (Excluding Back)	16	2.6%	1,009,437	3.2%	63,090
Back	150	24.1%	8,793,430	27.9%	58,623
Lower Extremities	177	28.5%	6,420,461	20.4%	36,274
Multiple Body Parts	37	5.9%	3,924,260	12.4%	106,061
Totals/Average	622		31,541,375		50,710

### TABLE 13, SHEET 2

## DISTRIBUTION BY PART OF BODY INDEMNITY DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Part of Body	of Claims	of Claims	of Claims
			(3)/(2)
Head	27	1,212,788	44,918
Neck	20	1,107,120	55,356
Upper Extremities	195	4,525,556	23,208
Trunk (Excluding Back)	16	625,318	39,082
Back	150	5,912,887	39,419
Lower Extremities	177	3,192,884	18,039
Multiple Body Parts	37	2,058,411	55,633
Totals/Average	622	18,634,964	29,960

TABLE 13, SHEET 3

## DISTRIBUTION BY PART OF BODY LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Part of Body	of Claims	of Claims	of Claims
		•	(3)/(2)
Head	10	399,213	39,921
Neck	13	245,000	18,846
Upper Extremities	89	1,291,512	14,511
Trunk (Excluding Back)	10	192,315	19,232
Back	92	1,456,222	15,829
Lower Extremities	78	888,064	11,385
Multiple Body Parts	16	391,904	24,494
Totals/Average	308	4,864,230	15,793

TABLE 13, SHEET 4

### DISTRIBUTION BY PART OF BODY MEDICAL DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Part of Body	of Claims	of Claims	of Claims
		•	(3)/(2)
Head	27	563,517	20,871
Neck	20	657,465	32,873
Upper Extremities	194	2,806,280	14,465
Trunk (Excluding Back)	16	343,872	21,492
Back	148	2,481,097	16,764
Lower Extremities	177	2,971,470	16,788
Multiple Body Parts	36	1,723,292	47,869
Totals/Average	618	11,546,993	18,684

TABLE 13, SHEET 5

## DISTRIBUTION BY PART OF BODY VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Part of Body	of Claims	of Claims	of Claims
· ·		•	(3)/(2)
Head	1	570	570
Neck	2	4,130	2,065
Upper Extremities	7	9,625	1,375
Trunk (Excluding Back)	0	0	,
Back	5	3,854	771
Lower Extremities	2	4,443	2,222
Multiple Body Parts	1	250	250
Totals/Average	18	22,872	1,271

TABLE 13, SHEET 6

## DISTRIBUTION BY PART OF BODY EXPENSE DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Part of Body	of Claims	of Claims	of Claims
			(3)/(2)
Head	20	73,279	3,664
Neck	18	57,024	3,168
Upper Extremities	162	376,433	2,324
Trunk (Excluding Back)	15	40,247	2,683
Back	130	395,592	3,043
Lower Extremities	142	251,664	1,772
Multiple Body Parts	29	142,307	4,907
Totals/Average	516	1,336,546	2,590

TABLE 14

DISTRIBUTION OF INDEMNITY BY INJURY TYPE

(1)	(2)	(3)	(4)	(5)	(5)
	Number	%	Dollar Cost	%	Average Cost
Indemnity Injury Type	of Claims	of Claims	of Claims	of Cost	of Claims
					(5)/(2)
Fatal	0	0%	0	0%	
PTD	3	0%	831,679	4%	277,226
PPD/Scheduled	329	52%	6,101,252	32%	18,545
PPD/Unscheduled	255	40%	11,202,675	60%	43,932
TTD	0	0%	0	0%	
TPD	0	0%	0	0%	
PPD/Disfigured	0	0%	0	0%	
Lump	35	6%	550,749	3%	15,736
Other Indemnity	8	1%	100,163	1%	12,520
Total / Average	630	100%	18,786,518	100%	29,820

TABLE 15

DISTRIBUTION BY IMPAIRMENT RATING

(1)	(2)	(3)	(4)	(5)	(6)
Impairment					
Rating	Total	% of	% ex	Total	Avg. Cost
Range	Claims	Total	Unknown	Cost	per Claim
					(5)/(2)
1 - 5	116	18%	23%	1,049,123	9.044
• •					
6 - 10	111	18%	22%	2,000,861	18,026
11 - 20	207	33%	41%	5,993,118	28,952
21 - 30	51	8%	10%	2,357,127	46,218
31 - 50	17	3%	3%	1,320,649	77,685
51 - 100	0	0%	0%	0	
Unknown	128	20%	25%	6,065,640	47,388
Totals / Averages	630			18,786,518	29,820

DISTRIBUTION BY TYPE OF CARRIER INDEMNITY DOLLARS

TABLE 16

(1)	(2)	(3)	(4)
Type of Carrier	Number of Claims	Dollar Cost of Claims	Average Cost of Claims
			(3)/(2)
Pinnacol Assurance	247	9,100,221	36,843
Commercial Insurers	174	5,714,179	32,840
Self Insurers	209	3,972,118	19,005
Totals/Average	630	18,786,518	29,820

TABLE 17

MEDICAL COSTS BY PROVIDER

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Type of Provider	of Claims	of Total Claims	of Claims	of Dollars	of Claims
					(3)/(2)
Non-Surgical MD	569	92.2%	1,404,384	12.2%	2,468
Surgical MD	311	50.4%	807,674	7.0%	2,597
Orthopedist	265	42.9%	300,293	2.6%	1,133
Osteopath	37	6.0%	45,795	0.4%	1,238
Mental Health Practitioner	90	14.6%	196,775	1.7%	2,186
Chiropractor	146	23.7%	236,327	2.1%	1,619
Hospital	472	76.5%	3,098,399	27.0%	6,564
Housekeeping	21	3.4%	14,391	0.1%	685
Home Modification Equipment	34	5.5%	37,117	0.3%	1,092
Prosthetics	66	10.7%	37,412	0.3%	567
Prescriptions	496	80.4%	619,253	5.4%	1,248
Pain Rehab/Work Hardening	54	8.8%	128,423	1.1%	2,378
Independent Medical Examiner	80	13.0%	87,427	0.8%	1,093
Funeral Expenses	1	0.2%	2,277	0.0%	2,277
Physical Therapy	500	81.0%	1,276,116	11.1%	2,552
Other Medical	564	91.4%	3,204,380	27.9%	5,682
Total / Average	617		11,496,443		18,633

#### NOTES:

Providers shown in BOLD are used in Chart 17b - Distribution of Charges by Type of Doctor.

TABLE 18 A, SHEET 1

# DESIGNATOR OF PROVIDER TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	556	88%	28,401,208	89%	51,081
Employee / Not Reported	74	12%	3,436,918	11%	46,445
T . I (1	(20)		21.020.126		50,537
Employee / Not Reported  Totals/Average	74 630	12%	3,436,918 31,838,126	11%	

TABLE 18 A, SHEET 2

# DESIGNATOR OF PROVIDER INDEMNITY DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	556	88%	16,554,096	88%	29,774
Employee / Not Reported	74	12%	2,232,422	12%	30,168
Totals/Average	630		18,786,518		29,820

TABLE 18 A, SHEET 3

# DESIGNATOR OF PROVIDER LUMP SUM DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	275	88%	4,325,944	89%	15,731
Employee / Not Reported	36	12%	559,940	11%	15,554
Totals/Average	311		4,885,884		15,710

TABLE 18 A, SHEET 4

# DESIGNATOR OF PROVIDER MEDICAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	553	88%	10,670,237	91%	19,295
Employee / Not Reported	72	12%	1,009,649	9%	14,023
Totals/Average	625		11,679,886		18,688

TABLE 18 A, SHEET 5

# DESIGNATOR OF PROVIDER VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	16	84%	17,814	77%	1,113
Employee / Not Reported	3	16%	5,412	23%	1,804
Totals/Average	19		23,226		1,222

TABLE 18 A, SHEET 6

# DESIGNATOR OF PROVIDER EXPENSE DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	449	86%	1,159,061	86%	2,581
Employee / Not Reported	72	14%	189,435	14%	2,631
Totals/Average	521		1,348,496		2,588

TABLE 18 B, SHEET 1

## DESIGNATOR OF PROVIDER BY CARRIER MEDICAL DOLLARS - PINNACOL ASSURANCE

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	245	100.0%	5,501,123	100.0%	22,454
Employee / Not Reported	0	0.0%	0	0.0%	
Totals/Average	245		5,501,123		22,454

TABLE 18 B, SHEET 2

## DESIGNATOR OF PROVIDER BY CARRIER MEDICAL DOLLARS - COMMERCIAL INSURERS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	103	59.9%	2,342,101	70.6%	22,739
Employee / Not Reported	69	40.1%	976,991	29.4%	14,159
Totals/Average	172		3,319,092		19,297

TABLE 18 B, SHEET 3

# DESIGNATOR OF PROVIDER BY CARRIER MEDICAL DOLLARS - SELF INSURERS

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
Designator	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Employer	205	98.6%	2,827,013	98.9%	13,790
Employee / Not Reported	3	1.4%	32,658	1.1%	10,886
Totals/Average	208		2,859,671		13,748

TABLE 19, SHEET 1

## MANAGED CARE MEDICAL COSTS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Claim Count	Claim Count	Medical Cost	Medical Cost	Average Medical Cost per	Average Medical Cost per
	With	Without	With	Without	Claim With	Claim Without
Carrier	Managed Care	Managed Care				
					(4)/(2)	(5)/(3)
Pinnacol Assurance	245	0	5,501,123	0	22,454	N/A
Commercial	164	8	3,213,684	105,408	19,596	13,176
Self Insurer	180	28	2,663,785	195,886	14,799	6,996
Totals/Average	589	36	11,378,592	301,294	19,318	8,369

TABLE 19, SHEET 2

## MANAGED CARE MEDICAL COSTS

	(1)	(2)	(3)	(4)	(5)	
	Early	Case		Utilization		
Carrier	Report	Manager	Network	Review	Other	
	Nun	ther of Claims w	vith Given Indicat	tor of Managed (	<sup>~</sup> are	
<del>-</del>	11411	iber of Claims v	orven muleur	or or wanagea	our c	
Pinnacol Assurance	195	245	234	0	0	
Commercial Insurer	124	98	129	27	0	
Self Insurer	105	69	144	10	1	
Total	424	412	507	37	1	
	(6)	(7)	(8)	(9)	(10)	
_	Amou	ınt of Medical C	ost for the Claims	s with Given Ind	icator	
Pinnacol Assurance	3,999,881	5,501,123	5,353,423	0	0	
Commercial Insurer	2,352,835	2,298,583	2,678,785	575,870	0	
Self Insurer	1,886,388	1,397,512	2,112,271	297,586	7,294	
Total	8,239,104	9,197,218	10,144,479	873,456	7,294	
	(11)	(12)	(13)	(14)	(15)	
_	Average Medical Cost Per Claim					
	(6)/(1)	(7)/(2)	(8)/(3)	(9)/(4)	(10)/(5)	
Pinnacol Assurance	20,512	22,454	22,878			
Commercial Insurer	18,974	23,455	20,766	21,329	7.001	
Self Insurer	17,966	20,254	14,669	29,759	7,294	
<u> </u>	19,432	22,323	20,009	23,607	7,294	

TABLE 20

# DISTRIBUTION BY TYPE OF CARRIER MEDICAL DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Type of Carrier	of Claims	of Claims	of Claims
			(3)/(2)
Pinnacol Assurance	245	5,501,123	22,454
Commercial Insurers	172	3,319,092	19,297
Self Insurers	208	2,859,671	13,748
Totals/Average	625	11,679,886	18,688

TABLE 21

SUMMARY OF VOCATIONAL REHAB COSTS BY TYPE OF CARRIER

(1)	(2)	(3)	(4)
Vocational	Number	Dollar Cost	Average Cost
Rehabilitation	of Claims	of Claims	of Claims
D'anna a l Anna anna			(3)/(2)
Pinnacol Assurance	_	004.040	400,000
Total Indemnity	5	801,612	160,322
Total Medical	5	616,144	123,229
Total Vocational Rehab	5	7,812	1,562
Total Lump Sum Payments	5	130,746	26,149
Total Expenses	5	77,432	15,486
Commercial			
Total Indemnity	7	566,851	80,979
Total Medical	7	168,782	24,112
Total Vocational Rehab	7	9,312	1,330
Total Lump Sum Payments	6	268,927	44,821
Total Expenses	7	38,130	5,447
Self Insurers			
Total Indemnity	7	242,857	34,694
Total Medical	7	81,953	11,708
Total Vocational Rehab	7	6,102	872
Total Lump Sum Payments	3	102,500	34,167
Total Expenses	3	24,054	8,018
All Carriers			
Total Indemnity	19	1,611,320	84,806
Total Medical	19	866,879	45,625
Total Vocational Rehab	19	23,226	1,222
Total Lump Sum Payments	14	502,173	35,870
Total Expenses	15	139,616	9,308
Total / Average		2,641,041	139,002

## TABLE 22 A, SHEET 1

# ATTORNEY INVOLVEMENT TOTAL DOLLARS

(1)	(2)	(3)	(4)
Claimant	Number	Dollar Cost	Average Cost
Attorney Involvement	of Claims	of Claims	of Claims
			(3)/(2)
Yes	252	18,294,347	72,597
No	378	13,543,779	35,830
Unknown	0	0	
Totals/Average	630	31,838,126	50,537

TABLE 22 A, SHEET 2

# ATTORNEY INVOLVEMENT INDEMNITY DOLLARS

(1)	(2)	(3)	(4)
Claimant	Number	Dollar Cost	Average Cost
Attorney Involvement	of Claims	of Claims	of Claims
			(3)/(2)
Yes	252	11,376,099	45,143
No	378	7,410,419	19,604
Unknown	0	0	
Totals/Average	630	18,786,518	29,820

TABLE 22 A, SHEET 3

# ATTORNEY INVOLVEMENT LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
Claimant	Number	Dollar Cost	Average Cost
Attorney Involvement	of Claims	of Claims	of Claims
			(3)/(2)
Yes	179	3,373,561	18,847
No	132	1,512,323	11,457
Unknown	0	0	
Totals/Average	311	4,885,884	15,710

TABLE 22 A, SHEET 4

# ATTORNEY INVOLVEMENT MEDICAL DOLLARS

(1)	(2)	(3)	(4)
Claimant	Number	Dollar Cost	Average Cost
Attorney Involvement	of Claims	of Claims	of Claims
			(3)/(2)
Yes	250	5,987,113	23,948
No	375	5,692,773	15,181
Unknown	0	0	
Totals/Average	625	11,679,886	18,688

TABLE 22 A, SHEET 5

## ATTORNEY INVOLVEMENT VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
Claimant	Number	Dollar Cost	Average Cost
Attorney Involvement	of Claims	of Claims	of Claims
			(3)/(2)
Yes	8	11,508	1,439
No	11	11,718	1,065
Unknown	0	0	
Totals/Average	19	23,226	1,222

TABLE 22 A, SHEET 6

## ATTORNEY INVOLVEMENT EXPENSE DOLLARS

(1)	(2)	(3)	(4)
Claimant	Number	Dollar Cost	Average Cost
Attorney Involvement	of Claims	of Claims	of Claims
			(3)/(2)
Yes	229	919,627	4,016
No	292	428,869	1,469
Unknown	0	0	
Totals/Average	521	1,348,496	2,588

TABLE 22 B, SHEET 1

## DISTRIBUTION BY ATTORNEY INVOLVEMENT

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
	of Claims	of Claims	of Claims	of Dollars	of Claims (4)/(2)
Claimant Attorney	252	40.0%	18,294,347	57.5%	72,597
No Claimant Attorney	378	60.0%	13,543,779	42.5%	35,830
Unknown	0	0.0%	0	0.0%	
Totals/Average	630		31,838,126		50,537

TABLE 22 B, SHEET 2

DISTRIBUTION BY ATTORNEY INVOLVEMENT - PINNACOL ASSURANCE

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost	Percent	Average Cost
	of Claims	of Claims	of Claims	of Dollars	of Claims (4)/(2)
Claimant Attorney	143	57.9%	11,824,935	78.3%	82,692
No Claimant Attorney	104	42.1%	3,283,885	21.7%	31,576
Unknown	0	0.0%	0	0.0%	
Totals/Average	247		15,108,820		61,169

TABLE 22 B, SHEET 3

DISTRIBUTION BY ATTORNEY INVOLVEMENT - COMMERCIAL INSURER

(1)	(2)	(3)	(4)	(5)	(6)
	Number of Claims	Percent of Claims	Dollar Cost	Percent of Dollars	Average Cost
	of Claims	of Claims	of Claims	oj Dollars	of Claims (4)/(2)
Claimant Attorney	37	21.3%	2,232,147	23.5%	60,328
No Claimant Attorney	137	78.7%	7,271,833	76.5%	53,079
Unknown	0	0.0%	0	0.0%	
Totals/Average	174		9,503,980		54,621

TABLE 22 B, SHEET 4

DISTRIBUTION BY ATTORNEY INVOLVEMENT - SELF INSURER

(1)	(2)	(3)	(4)	(5)	(6)
	Number	Percent	Dollar Cost of Claims	Percent	Average Cost of Claims
	of Claims	of Claims		of Dollars	
					(4)/(2)
Claimant Attorney	72	34.4%	4,237,265	58.6%	58,851
No Claimant Attorney	137	65.6%	2,988,061	41.4%	21,811
Unknown	0	0.0%	0	0.0%	
Totals/Average	209		7,225,326		34,571

TABLE 23 A

# TIME LINES REPORTED TO EMPLOYER

	(1)		(2)	(3)	(4)	(5)	(6)
Number of Days from Date of Injury to			Percent	Dollar Cost			
		Number			Percent	Average Cost	
Date Repor	ted to	o Employer	of Claims	of Claims	of Claims	of Dollars	of Claims
_					•	•	(4)/(2)
Up to		10	557	88%	28,749,700	90%	51,615
11	-	20	18	3%	737,600	2%	40,978
21	-	30	4	1%	135,036	0%	33,759
31	-	60	5	1%	177,469	1%	35,494
61	-	90	5	1%	202,727	1%	40,545
91	-	180	7	1%	237,563	1%	33,938
181	-	270	2	0%	153,064	0%	76,532
271	-	360	1	0%	119,627	0%	119,627
361	-	540	2	0%	61,256	0%	30,628
541	-	720	0	0%	0	0%	
721	-	900	0	0%	0	0%	
901	-	1,260	0	0%	0	0%	
Over		1,260	1	0%	8,005	0%	8,005
Unknown			28	4%	1,256,079	4%	44,860
Totals			630		31,838,126		50,537

MILLIMAN USA

TABLE 23 B

# TIME LINES REPORTED TO INSURER

Numb	(1) er of	Days	(2)	(3)	(4)	(5)	(6)
from Date Repo	e of	Injury to	Number of Claims	Percent of Claims	Dollar Cost of Claims	Percent of Dollars	Average Cost of Claims
•			•	•	v	·	(4)/(2)
Up to		10	435	69%	20,871,039	66%	47,979
11	-	20	59	9%	3,188,698	10%	54,046
21	-	30	27	4%	1,437,656	5%	53,247
31	-	60	28	4%	2,476,727	8%	88,455
61	-	90	19	3%	1,075,087	3%	56,584
91	-	180	17	3%	961,288	3%	56,546
181	-	270	6	1%	142,611	0%	23,769
271	-	360	4	1%	261,082	1%	65,271
361	-	540	5	1%	153,390	0%	30,678
541	-	720	1	0%	6,464	0%	6,464
721	-	900	0	0%	0	0%	
901	-	1,260	0	0%	0	0%	
Over		1,260	1	0%	8,005	0%	8,005
Unknown			28	4%	1,256,079	4%	44,860
Totals			630		31,838,126		50,537

MILLIMAN USA

TABLE 23 C

## TIME LINES FIRST INDEMNITY PAYMENT

	(1)		(2)	(3)	(4)	(5)	(6)
Numbe	er of	Days					
from Date	e of	Injury to	Number	Percent	Dollar Cost	Percent	Average Cost
First Inden			of Claims	of Claims	of Claims	of Dollars	of Claims
		·	·	*	•	·	(4)/(2)
Up to		10	40	6%	3,555,756	11%	88,894
11	-	20	83	13%	4,158,747	13%	50,105
21	-	30	49	8%	3,569,287	11%	72,843
31	-	60	77	12%	5,421,523	17%	70,409
61	-	90	46	7%	1,997,522	6%	43,424
91	-	180	86	14%	3,394,434	11%	39,470
181	-	270	60	10%	2,305,362	7%	38,423
271	-	360	41	7%	1,154,811	4%	28,166
361	-	540	42	7%	1,562,997	5%	37,214
541	-	720	29	5%	1,108,878	3%	38,237
721	-	900	6	1%	353,835	1%	58,973
901	-	1,260	13	2%	681,761	2%	52,443
Over		1,260	7	1%	623,363	2%	89,052
Unknown		•	51	8%	1,949,850	6%	38,232
Totals			630		31,838,126		50,537

630 31,838,126 50,537 Totals

TABLE 23 D

# TIME LINES RETURNED TO WORK

	(1)		(2)	(3)	(4)	(5)	(6)
Numb	Number of Days						
from Date of Injury to		Number	Percent	Dollar Cost	Percent	Average Cost	
Date of F	Returi	n to Work	of Claims	of Claims	of Claims	of Dollars	of Claims
						•	(4)/(2)
Up to		10	62	10%	2,583,639	8%	41,672
11	-	20	20	3%	989,751	3%	49,488
21	-	30	4	1%	118,138	0%	29,535
31	-	60	22	3%	559,599	2%	25,436
61	-	90	33	5%	825,581	3%	25,018
91	-	180	44	7%	2,241,334	7%	50,939
181	-	270	23	4%	1,180,872	4%	51,342
271	-	360	14	2%	612,183	2%	43,727
361	-	540	14	2%	496,981	2%	35,499
541	-	720	6	1%	484,803	2%	80,801
721	-	900	4	1%	218,744	1%	54,686
901	-	1,260	1	0%	31,585	0%	31,585
Over		1,260	4	1%	256,097	1%	64,024
Unknowr	1		379	60%	21,238,819	67%	56,039
Totals			630		31,838,126		50,537

TABLE 23 E

## TIME LINES MAX MEDICAL IMPROVEMENT

	(1)	(2)	(3)	(4)	(5)	(6)
Numb	per of Days					
from Da	te of Injury to	Number	Percent	Dollar Cost	Percent	Average Cost
Max Medic	cal Improvement	of Claims	of Claims	of Claims	of Dollars	of Claims
						(4)/(2)
Up to	10	1	0%	4,877	0%	4,877
11	- 20	0	0%	0	0%	•
21	- 30	0	0%	0	0%	
31	- 60	3	0%	39,088	0%	13,029
61	- 90	17	3%	252,438	1%	14,849
91	- 180	76	12%	1,724,173	5%	22,686
181	- 270	94	15%	2,385,398	7%	25,377
271	- 360	70	11%	2,734,510	9%	39,064
361	- 540	91	14%	5,028,321	16%	55,256
541	- 720	40	6%	2,473,357	8%	61,834
721	- 900	22	3%	1,962,106	6%	89,187
901	- 1,260	21	3%	1,886,809	6%	89,848
Over	1,260	21	3%	3,035,853	10%	144,564
Unknov	vn or N/A	174	28%	10,311,196	32%	59,260
Totals		630		31,838,126		50,537

630 31,838,126 50,537 Totals

TABLE 24, SHEET 1

## **DURATION OF BENEFITS**

(1)	(2)	(3)	(4)	(5)	(6)
Number of Years					
from Date of Injury to	Number	Percent	Dollar Cost	Percent	Average Cost
Date Claim Closed	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Up to 0.25	2	0%	6,438	0%	3,219
0.26 - 0.50	26	4%	305,910	1%	11,766
0.51 - 0.75	41	7%	676,532	2%	16,501
0.76 - 1.00	63	10%	1,104,610	3%	17,533
1.01 - 1.50	122	19%	3,965,373	12%	32,503
1.51 - 2.00	94	15%	3,809,641	12%	40,528
2.01 - 2.50	97	15%	5,668,301	18%	58,436
2.51 - 3.00	37	6%	2,013,346	6%	54,415
3.01 - 3.50	40	6%	2,148,218	7%	53,705
3.51 - 4.00	30	5%	2,545,429	8%	84,848
4.01 - 4.50	20	3%	1,752,950	6%	87,648
4.51 - 5.00	13	2%	1,542,701	5%	118,669
Over 5.00	45	7%	6,298,677	20%	139,971
Totals/Average	630		31 838 126		50 537

Totals/Average 630 31,838,126 50,537

TABLE 24, SHEET 2 **DURATION OF BENEFITS - PINNACOL ASSURANCE** 

(1)	(2)	(3)	(4)	(5)	(6)
Number of Years					
from Date of Injury to	Number	Percent	Dollar Cost	Percent	Average Cost
Date Claim Closed	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Up to 0.25	0	0%	0	0%	
0.26 - 0.50	0	0%	0	0%	
0.51 - 0.75	3	1%	52,091	0%	17,364
0.76 - 1.00	19	8%	229,775	2%	12,093
1.01 - 1.50	42	17%	1,500,999	10%	35,738
1.51 - 2.00	52	21%	2,334,631	15%	44,897
2.01 - 2.50	40	16%	2,068,246	14%	51,706
2.51 - 3.00	15	6%	819,625	5%	54,642
3.01 - 3.50	23	9%	1,299,678	9%	56,508
3.51 - 4.00	14	6%	1,523,039	10%	108,789
4.01 - 4.50	9	4%	740,039	5%	82,227
4.51 - 5.00	8	3%	1,136,890	8%	142,111
Over 5.00	22	9%	3,403,807	23%	154,719
T-4-1-/A	247		15 100 020		<i>C</i> :

*Totals/Average* 247 15,108,820 61,169

TABLE 24, SHEET 3 **DURATION OF BENEFITS - COMMERCIAL INSURERS** 

(1)	(2)	(3)	(4)	(5)	(6)
Number of Years					
from Date of Injury to	Number	Percent	Dollar Cost	Percent	Average Cost
Date Claim Closed	of Claims	of Claims	of Claims	of Dollars	of Claims
					(4)/(2)
Up to 0.25	0	0%	0	0%	
0.26 - 0.50	0	0%	0	0%	
0.51 - 0.75	5	3%	76,098	1%	15,220
0.76 - 1.00	9	5%	178,078	2%	19,786
1.01 <b>-</b> 1.50	43	25%	1,193,894	13%	27,765
1.51 - 2.00	22	13%	808,354	9%	36,743
2.01 - 2.50	38	22%	2,117,374	22%	55,720
2.51 - 3.00	13	7%	721,772	8%	55,521
3.01 - 3.50	11	6%	635,599	7%	57,782
3.51 <b>-</b> 4.00	8	5%	671,164	7%	83,896
4.01 - 4.50	7	4%	819,281	9%	117,040
4.51 - 5.00	2	1%	203,765	2%	101,883
Over 5.00	16	9%	2,078,601	22%	129,913
otals/Average	174		9,503,980		54,621

TABLE 24, SHEET 4 **DURATION OF BENEFITS - SELF INSURERS** 

(1)		(2)	(3)	(4)	(5)	(6)
Number of Yea	ars					
from Date of Inju	ıry to	Number	Percent	Dollar Cost	Percent	Average Cost
Date Claim Cla	osed	of Claims	of Claims	of Claims	of Dollars	of Claims
						(4)/(2)
Up to	0.25	2	1%	6,438	0%	3,219
0.26 <b>-</b>	0.50	26	12%	305,910	4%	11,766
0.51 <b>-</b>	0.75	33	16%	548,343	8%	16,616
0.76 <b>-</b>	1.00	35	17%	696,757	10%	19,907
1.01 -	1.50	37	18%	1,270,480	18%	34,337
1.51 <b>-</b>	2.00	20	10%	666,656	9%	33,333
2.01 -	2.50	19	9%	1,482,681	21%	78,036
2.51 <b>-</b>	3.00	9	4%	471,949	7%	52,439
3.01 <b>-</b>	3.50	6	3%	212,941	3%	35,490
3.51 <b>-</b>	4.00	8	4%	351,226	5%	43,903
4.01 -	4.50	4	2%	193,630	3%	48,408
4.51 <b>-</b>	5.00	3	1%	202,046	3%	67,349
Over	5.00	7	3%	816,269	11%	116,610
Totals/Average		209		7,225,326		34,571

TABLE 25, SHEET 1

# DISTRIBUTION BY CLAIMANT AGE TOTAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Average	Number	Percent	Dollar Cost	Percent	Average Cost
Claimant Age	Age	of Claims	of Claims	of Claims	of Dollars	of Claims
						(5)/(3)
Up to 19	18.54	12	2%	503,175	2%	41,931
20 to 29	25.93	99	16%	4,548,256	14%	45,942
30 to 39	35.01	155	25%	7,114,151	22%	45,898
40 to 49	44.15	213	34%	12,717,601	40%	59,707
50 to 59	54.17	112	18%	5,475,711	17%	48,890
60 to 69	63.16	37	6%	1,433,481	5%	38,743
70 to 79	72.44	2	0%	45,751	0%	22,876
80 and Over	0.00	0	0%	0	0%	
Unknown		0	0%	0	0%	
Totals/Average		630		31,838,126		50,537

TABLE 25, SHEET 2

## DISTRIBUTION BY CLAIMANT AGE INDEMNITY DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Average	Number	Percent	Dollar Cost	Percent	Average Cost
Claimant Age	Age	of Claims	of Claims	of Claims	of Dollars	of Claims
						(5)/(3)
Up to 19	18.54	12	2%	291,496	2%	24,291
20 to 29	25.93	99	16%	2,814,053	15%	28,425
30 to 39	35.01	155	25%	4,222,031	22%	27,239
40 to 49	44.15	213	34%	7,246,043	39%	34,019
50 to 59	54.17	112	18%	3,403,571	18%	30,389
60 to 69	63.16	37	6%	789,619	4%	21,341
70 to 79	72.44	2	0%	19,705	0%	9,853
80 and Over	0.00	0	0%	0	0%	
Unknown		0	0%	0	0%	

Totals/Average 630 18,786,518 29,820

TABLE 25, SHEET 3

# DISTRIBUTION BY CLAIMANT AGE LUMP SUM DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Average	Number	Percent	Dollar Cost	Percent	Average Cost
Claimant Age	Age	of Claims	of Claims	of Claims	of Dollars	of Claims
						(5)/(3)
Up to 19	18.54	7	2%	156,062	3%	22,295
20 to 29	25.93	52	17%	718,589	15%	13,819
30 to 39	35.01	88	28%	1,137,446	23%	12,926
40 to 49	44.15	101	32%	1,815,681	37%	17,977
50 to 59	54.17	48	15%	874,378	18%	18,216
60 to 69	63.16	14	5%	178,728	4%	12,766
70 to 79	72.44	1	0%	5,000	0%	5,000
80 and Over	0.00	0	0%	0	0%	
Unknown		0	0%	0	0%	
Totals/Average		311		4,885,884		15,710

TABLE 25, SHEET 4

# DISTRIBUTION BY CLAIMANT AGE MEDICAL DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Average	Number	Percent	Dollar Cost	Percent	Average Cost
Claimant Age	Age	of Claims	of Claims	of Claims	of Dollars	of Claims
						(5)/(3)
Up to 19	18.54	11	2%	182,601	2%	16,600
20 to 29	25.93	99	16%	1,521,996	13%	15,374
30 to 39	35.01	155	25%	2,555,839	22%	16,489
40 to 49	44.15	211	34%	4,964,190	43%	23,527
50 to 59	54.17	110	18%	1,842,495	16%	16,750
60 to 69	63.16	37	6%	588,859	5%	15,915
70 to 79	72.44	2	0%	23,906	0%	11,953
80 and Over	0.00	0	0%	0	0%	
Unknown		0	0%	0	0%	
Totals/Average		625		11,679,886		18,688

TABLE 25, SHEET 5

# DISTRIBUTION BY CLAIMANT AGE VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Average	Number	Percent	Dollar Cost	Percent	Average Cost
Claimant Age	Age	of Claims	of Claims	of Claims	of Dollars	of Claims
						(5)/(3)
Up to 19	18.54	0	0%	0	0%	
20 to 29	25.93	3	16%	1,509	6%	503
30 to 39	35.01	2	11%	736	3%	368
40 to 49	44.15	6	32%	8,296	36%	1,383
50 to 59	54.17	6	32%	11,262	48%	1,877
60 to 69	63.16	2	11%	1,423	6%	712
70 to 79	72.44	0	0%	0	0%	
80 and Over	0.00	0	0%	0	0%	
Unknown		0	0%	0	0%	
Totals/Average		19		23,226		1,222

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TABLE 25, SHEET 6

# DISTRIBUTION BY CLAIMANT AGE EXPENSE DOLLARS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Average	Number	Percent	Dollar Cost	Percent	Average Cost
Claimant Age	Age	of Claims	of Claims	of Claims	of Dollars	of Claims
						(5)/(3)
Up to 19	18.54	10	2%	29,078	2%	2,908
20 to 29	25.93	86	17%	210,698	16%	2,450
30 to 39	35.01	133	26%	335,545	25%	2,523
40 to 49	44.15	171	33%	499,072	37%	2,919
50 to 59	54.17	88	17%	218,383	16%	2,482
60 to 69	63.16	31	6%	53,580	4%	1,728
70 to 79	72.44	2	0%	2,140	0%	1,070
80 and Over	0.00	0	0%	0	0%	
Unknown		0	0%	0	0%	
Totals/Average		521		1,348,496		2,588

TABLE 26, SHEET 1

## DISTRIBUTION BY CLAIMANT GENDER TOTAL DOLLARS

(1)	(2)	(3)	(4)	
	Number	Dollar Cost	Average Cost	
Claimant Gender	of Claims	of Claims	of Claims	
			(3)/(2)	
Male	388	20,952,624	54,002	
Female	239	10,746,678	44,965	
Not Reported	3	138,824	46,275	
Totals/Average	630	31,838,126	50,537	

TABLE 26, SHEET 2

## DISTRIBUTION BY CLAIMANT GENDER INDEMNITY DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Claimant Gender	of Claims	of Claims	of Claims
			(3)/(2)
Male	388	12,501,007	32,219
Female	239	6,209,987	25,983
Not Reported	3	75,524	25,175
Totals/Average	630	18,786,518	29,820

TABLE 26, SHEET 3

## DISTRIBUTION BY CLAIMANT GENDER LUMP SUM DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Claimant Gender	of Claims	of Claims	of Claims
			(3)/(2)
Male	196	3,247,904	16,571
Female	113	1,612,013	14,266
Not Reported	2	25,967	12,984
Totals/Average	311	4,885,884	15,710

TABLE 26, SHEET 4

## DISTRIBUTION BY CLAIMANT GENDER MEDICAL DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Claimant Gender	of Claims	of Claims	of Claims
			(3)/(2)
Male	385	7,678,995	19,945
Female	237	3,942,212	16,634
Not Reported	3	58,679	19,560
Totals/Average	625	11,679,886	18,688

TABLE 26, SHEET 5

## DISTRIBUTION BY CLAIMANT GENDER VOCATIONAL REHAB DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Claimant Gender	of Claims	of Claims	of Claims
			(3)/(2)
Male	11	18,309	1,664
Female	8	4,917	615
Not Reported	0	0	
Totals/Average	19	23,226	1,222

TABLE 26, SHEET 6

## DISTRIBUTION BY CLAIMANT GENDER EXPENSE DOLLARS

(1)	(2)	(3)	(4)
	Number	Dollar Cost	Average Cost
Claimant Gender	of Claims	of Claims	of Claims
			(3)/(2)
Male	323	754,313	2,335
Female	196	589,562	3,008
Not Reported	2	4,621	2,311
Totals/Average	521	1,348,496	2,588