

**An Evaluation of Contested Cardiovascular
and Respiratory Disease Cases from the
California Workers' Compensation Appeals Board, 1974-75**

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BACKGROUND

The California Workers' Compensation Act provides coverage for all diseases caused by or aggravated by the work environment. Pre-existing diseases are compensable if the work environment can be shown to have accelerated the disease state. Benefits awarded the employee can include cash for lost wages, medical expenses, permanent disability payments, and rehabilitation services. In addition death benefits may be paid to the deceased worker's family. All benefits are paid by defendant: the insurance carrier, the self-insured employer or uninsured employer.

The vast majority (>85%) of Workers Compensation Claim are paid without contest. The remaining <15% of the cases enter into the Workers' Compensation Appeals Board mechanism.

Originally, Workers' Compensation was awarded solely for specific occupational injuries, generally restricted to trauma. The concept of "injury" has been expanded to include various occupational diseases traditionally defined as cumulative effects of inhalation or ingestion of toxic substances which ultimately manifest a specific pathology. The definition of disease has in turn been expanded to include the concept "cumulative injury". This concept initially arose out of a court decision; the California Legislature defines a cumulative injury as one arising from "repetitive mental or physically traumatic activity

extending over a period of time, a combination of effects which causes a permanent disability or need for medical treatment." Cumulative injury is a legal term and should not be understood as a medical diagnosis.

This is a descriptive study of cardiovascular and respiratory disease claims contested before the California Workers' Compensation Appeals Board and resolved during the period July 1974-September 1975. Only resolved contested cases from the WCAB files have been included in this report. The time span of July 1974 to September 1975 was selected because the files for that period were complete and readily accessible. Uncontested cases were not included as the WCAB has neither a system of identification for these cases nor any method of computer retrieval for them. Contested claims tend to be more chronic disease cases, those cases with more serious disability, or those whose etiological factors are controversial. The majority of the uncontested cases involve individuals with acute illnesses, short term disabilities and/or medical payments.

The study of the history of contested claims involving two selected organ systems will describe how the system compensates for diseases which frequently give rise to conflicting medical and legal opinions. Secondly, California will be divided into three regions--Northern, South-

ern, and Central Valley* --in an effort to determine whether or not regional patterns can be detected in the decisions rendered on disputed claims.

Finally, under California law there is rebuttable presumption of work-relatedness for certain occupational diseases occurring in certain public safety (police and fire department) employees. In both police officers and fire fighters these diseases are heart trouble (heart disease of any type), pneumonia, and hernia. Since public safety officers have a special legal status by virtue of these presumptions, their experience as a group will be compared with that of all other employees, in both public and private sectors to show what, if any, effects result from this special status.

PROCEDURE

When a party desires a ruling by the WCAB, either a Division of Industrial Accidents (DIA) Form 325 or a stipulated agreement with a request for an award is completed, and the case enters the WCAB System. The injury or disease is placed into one of eight categories. When the case is resolved, additional information is entered on DIA Form 326.

*The authors divided the state into three regions: central valley, southern, and northern. The central valley WCAB offices included: Bakersfield, Fresno, Sacramento, Stockton, and Redding. The southern WCAB offices included: Los Angeles, Pomona, Inglewood, Santa Monica, San Diego, Santa Anna, San Bernadino, Santa Barbara, Bell Gardens, Ventura, and Van Nuys. The northern region included WCAB offices in Eureka, Oakland, Salinas, San Francisco, Santa Rosa and San Jose.

The following data from both of these forms are entered into the DIA computerized data retrieval system: applicant's name, WCAB local office, injury/disease category, closing date, and some limited information about compensation costs. A computer printout of all the completed cases for the study period for cardiovascular and respiratory disease cases was made available to the authors by DIA for research purposes.

An abstract form was developed utilizing both pre-coded and open ended items. Two abstracters personally visited and evaluated case files in 21 of the 23 WCAB offices. Cases from the 2 offices not visited, Redding and Eureka, were mailed to the abstractors for review. The review of each case involved reading the entire file in order to abstract the desired information. The data were then coded and keypunched for data processing. The computer services of the University of California were used for data analysis. All of the fatal cardiovascular, fatal and non-fatal respiratory cases were evaluated. A 50% sample of the nonfatal cardiovascular cases was evaluated, as budget and time restrictions made it impossible to examine all cases.

The same parameters were examined for each group. The parameters evaluated included the following: type of injury, type of award decision, category of disability, employment category, type of defendant, diagnosis, physician

opinion regarding industrial causation, monetary awards (total, applicant, applicant attorney, applicant medical-legal evaluation, and other medical), award of future medical care, and WCAB office location. Descriptive statistics using cross tabulation were done on the various parameters. When the number of cases permitted, hypothesis testing was done using Chi square. Analysis was limited to cases in which a monetary award was ultimately granted. The results will be described in four groups: (1) Nonfatal cardiovascular Disease Cases (2) Fatal Cardiovascular Disease Cases, 3) Nonfatal Respiratory Disease Cases, and (4) Fatal Respiratory Disease Cases.

Like any other specialized activity, Workers Compensation has a jargon peculiar to it. In the interest of clarity, some of the terms are defined here, as they will be used extensively throughout this report.

There are three types of filings, "cumulative", "specific", and "both". "Cumulative" injury has been defined above (see Introduction). "Specific" injury is an event or injury occurring on a specific date. "Both" refers to some combination of cumulative and specific.

There are two general types of award decisions: Finding and Award (F+A) and Compromise and Release (C+R). An "F+A" is a judicial decision made by a WCAB judge. The

judge may be asked to decide on any or all of the following if the parties cannot agree: industrial causation, extent of disability, apportionment, future medical benefits.

Thus, the parties could agree on industrial causation but disagree on some other factor and require a judge's decision. A "C+R" is an agreement concluded by the two parties (applicant and defendant). Generally, the applicant releases the defendant from further liability; this action must be approved by a WCAB judge. Frequently cases will be settled by C+R if there is some danger of losing the case, i.e. a partial loaf is better than no loaf.

There are three types of disability: temporary disability is paid for wage loss during the healing period; permanent partial disability means the applicant has less than a 100% disability; permanent total disability means the individual has a 100% disability. However, for permanent partial disability greater than 70% and for total disability, there is a lifetime pension in addition to the award. For this report permanent disability will be divided into two groups: <70% and >70%.

A portion of the claims examined in this study involved not only the principal organ system under consideration, but also injuries or illnesses in other parts of the body. This is often done by attorneys in order to submit a

single unified claim rather than a series of individual claims for the same individual. For the sake of brevity, such cases are referred to in this report as "joined" cases.

I. Nonfatal Cardiovascular Disease Cases

As mentioned above, only 50% of the total number of cases in this category were included in the study. In order to maintain regional proportionality, $\frac{1}{2}$ of the cases at each of the WCAB offices was used. The total sample (50%) was 543 cases, of which 397 were correctly classified and complete for analysis. Of the rejected cases 119 were misclassified, 17 had no injury, and 10 were incomplete. We assumed the rejection rate to be the same in the unused 50% of the cases; under this assumption the actual total number of cases would be 794.

The percentage of nonfatal cardiovascular disease cases by type of injury compared to award decision and disability category are shown in Table I. 19.5% of these cases were joined with some other type of injury; 72.7% claimed to involve some degree of cumulative injury. Awards for $\leq 70\%$ permanent disability were far more common than $> 70\%$ permanent disability (68.7% vs 25.1%). The mean age for the C+R cases was 53; for the F+A cases it was 49. There were no age differences in either group by degree of disability.

The distribution of cases by employment categories

and type of award decisions is shown in Table II. While public sector employees comprise 56.3% of all cases, 38.3% of all cases were public safety employees. The public safety employees are the only group in which the F+A type of award decision is more common than the C+R method. In light of the legislated presumptions (presumptions not based on scientific data), it may seem curious to find that a higher percentage of public safety officials' claims are settled by F+A. However, examination of these claims shows that the issues contested are those other than causation.

The various defendants were divided into five groups (Table III) private insurance companies, the State Compensation Insurance Fund, the legally uninsured, the self-insured, or some combination of these four groups. The legally uninsured tend to be large public jurisdictions while the self-insured tend to be large corporations. The State Compensation Insurance Fund insures many types of employers, including those who can not obtain coverage from private carriers. Since in some cases employers had changed carrier categories or the claimant had worked for multiple employers, the multiple defendant listing was necessary. Table III shows the type of defendant compared to the type of award decision for the nonfatal cardiovascular disease cases. An inspection of the F+A data would indicate that

the State Compensation Insurance Fund and the legally uninsured are more likely to be defendants in claims brought by public safety employees than are either the self-insured or private insurance carriers. The primary reason is that these two defendant groups insure most public safety employees. Although the State Compensation Insurance Fund and the private insurance companies were defendants in nearly equal numbers of cases, resolution of these cases was quite different; most resolutions for the private insurance carriers were C+R while those for the State Compensation Insurance Fund were more evenly divided between C+R and F+A.

Table IV shows the types of award decisions made in four diagnostic categories of nonfatal cardiovascular disease. There were 4 major categories of diagnosis: specific myocardial infarction, generalized coronary artery disease, hypertensive heart disease, and other. 57.1% of all claims were due to a specific myocardial infarction; 28.6% were due to generalized coronary artery disease, and 10% were due to hypertensive heart disease. Generalized coronary artery disease and hypertensive heart disease would not be considered acute diseases, but rather chronic disease processes that at some point in time produce disabling symptoms or conditions. A myocardial infarction would be considered an acute event in a chronic disease process. The data indicated that compensation for any degree of permanent

disability is for chronic disease processes.

An important, if not vital aspect to the resolution of a contested compensation case is the physician's opinion regarding industrial causation. Has the disease been caused by or has its course been influenced by the occupational environment? The evaluation of physician opinion regarding industrial causation for nonfatal cardiovascular disease cases is shown in Table V. There are three separate groups of physicians: the applicant attorney referred physician, (AARMD), the defendant attorney referred physician (DARMD), and the patient's treating physician (TMD). The (AARMD) is the physician who evaluated the patient for compensation purposes by referral from the applicant attorney. The (DARMD) is the physician who evaluated the patient for compensation purposes by referral from the defendant attorney. The (TMD) is generally the physician who has been treating the claimant for the condition. There is a significant difference in opinion among the three different physician groups regarding industrial causation. The (DARMD) found no evidence of industrial causation in 64.4% of the cases, found evidence for industrial causation in 29.2% of the cases, and made no statement about industrial causation in 5.4% of the cases. The (AARMD) found evidence of industrial causation in 96% of the cases, found no evidence in 2.2% and made no statement about industrial causa-

tion in 1.8% of the cases. The (TMD) found evidence of industrial causation in 45.4% of the cases, no evidence in 7.8% of the cases, and made no statement about industrial causation in 52.7% of the cases. There are statistically significant differences ($p < 0.001$) for positive evidence of industrial causation among the three groups of physicians (AARMD vs. DARMD, AARMD vs. TMD, DARMD vs. TMD).

Table VI shows the mean dollar and future medical benefits award for type of award decisions and category of disability for nonfatal cardiovascular disease cases. The different monetary categories include total awards, the applicant's award (the amount that the applicant actually receives), the applicant attorney's award, the applicant medical-legal evaluation costs, and other medical-legal costs (including duplicating, liens by medical providers including hospitals, etc.) The awards by F+A for all three categories of disability were greater than the corresponding awards by C+R. However, a statistically significant difference ($p < 0.01$) was observed only in the 70% permanent disability category. The data show that larger monetary awards are made for greater degrees of disability. When future medical benefits are awarded, those benefits are to pay for future medical expenses associated with the compensated medical condition. There is a highly statistically significant difference ($p < 0.01$) in future medical care

awards for the F+A compared to the C+R cases. 90.6% of the F+A <70% permanent disability group received future medical care compared to only 6.6% for the corresponding C+R group. 90.8% of the F+A >70% permanent disability group received future medical care awards compared to 16.2% for the C+R group.

The comparison of mean awards for permanent disability of public safety employees to all other employees for nonfatal cardiovascular disease cases is shown in Table VII. The data show that public safety employees received more money in 3 of 4 categories; the exception was the F+A >70% permanent disability category. This latter category was the only one in which there was a statistically significant difference ($p < 0.03$) with all other employees averaging awards of \$39,918 compared to the public safety employees average award of \$31,579. The data in this table would tend to indicate that although public safety employees have a legislated presumption for developing heart trouble, the amount of their awards is not significantly greater than those granted to employees without this presumption.

The mean total awards by geographic region for type of award decisions and category of disability for nonfatal cardiovascular disease cases is examined in Table VIII. Joined cases (heart disease plus some other system) are excluded from these data. While there are some monetary

differences in some specific categories, no pattern of differences by region can be detected.

II. Fatal Cardiovascular Disease Cases

One hundred and twenty-nine death claims were initially identified from the WCAB computerized list. Of those cases, 7 were excluded from analysis--4 of these had monetary awards, and 3 had no occupational injury. An additional 25 cases were found misclassified in the original non-fatal cardiovascular disease sample previously described. There were then 147 cases satisfactory for analysis. Since the sample of nonfatal cardiovascular disease cases represented 50% of all such cases, an additional 25 fatal cardiovascular disease cases would be expected, had all nonfatal cardiovascular disease cases been examined.

Table IX compares types of fatal cardiovascular disease injuries to type of awarded decisions. Three percent of the cases were joined with some other injury. 56.5% of all cases claimed some degree of cumulative injury. Only 24.5% of the cases were settled by F+A, while 75.6% were settled by C+R. The mean age for the F+A cases was 55 years, while it was 54 years for the C+R cases.

The distribution of fatal cardiovascular disease cases by employment categories and type of award decisions is shown in Table X. Public sector employees represented

33.3% of all cases; 20.4% of all cases were public safety employees. The public safety employees are the only group in which the F+A type of award decision is more common than C+R. The other employment categories with a high percentages of fatal cardiovascular disease cases include service (21.8%), trade (19.2%) and manufacturing (14.3%).

The type of defendant by type of award decision for fatal cardiovascular disease cases is shown in Table XI. Private insurance companies (44.9%) and state compensation insurance fund (32.0%) were defendants of the vast majority of cases. There was a considerable difference in how private insurance companies settled cases compared to the State Compensation Insurance Fund. The private insurance company settled 90% of their cases by the C+R method and 10% by the F+A method while the State Compensation Insurance Fund settled 67% by the C+R method and 33% by the F+A method. The legally uninsured employers had 5.4% of the cases with 3.4% settled by F+A and 2.0% by C+R. This difference reflects, to some degree, the fact that the latter two defendants insure most public safety employees.

Table XII indicates the type of award made in four diagnostic categories. 71.3% of all cases were specific myocardial infarction. 24.5% were generalized coronary artery disease, while 1.4% were hypertensive heart disease and 2.8% other heart disease. Generalized coronary artery

disease and hypertensive heart disease are chronic processes while myocardial infarction is usually an acute event of a chronic process (coronary artery disease).

The evaluation of physician opinion regarding industrial causation for fatal cardiovascular diseases is shown in Table XIII. There are three separate groups of physicians: applicant-attorney referred (AARMD), the defendant attorney referred (DARMD), and the patient's treating physician (TMD). The AARMD found evidence of industrial causation in 92.7% of the cases and made no statement in the remaining 7.3% of cases. The DARMD found evidence of industrial causation in 12.7% of the cases, found no evidence in 77.4% of the cases and made no statement in 9.8% of the cases. The TMD found evidence of industrial causation in 22.5% of the cases, found no evidence in 11.1% of the cases and made no statement in 66.3%. There are statistically significant differences ($p < 0.001$) for positive evidence of industrial causation among the three physician groups (AARMD vs DARMD, AARMD vs TMD).

Table XIV shows the mean dollar award by type of award decision for fatal cardiovascular disease cases. The different monetary categories include: total awards, the applicant's award, the applicant's attorney award, the applicant's medical-legal evaluation cost, and other medical-legal costs. The mean total award for F+A cases was

\$34,589, more than double that for C+R cases, whose mean total award was \$16,517. This difference is statistically significant at ($p < 0.001$).

The comparison of total awards of public safety employees to all other employees for fatal cardiovascular disease cases is shown in Table XV. By the F+A method the public safety employees received \$34,357 while all other employees received \$34,878 per case. By the C+R method the public safety employees received \$14,354 while all other employee received \$16,729. The data in this table would tend to indicate that although public safety employees have a legislative presumption for developing heart disease, the amount of their awards are similar to employees without this presumption.

The total awards by geographic region for type of award decision are examined in Table XVI. The joined cases are excluded from this table. While there are considerable differences in total awards for the F+A vs the C+R award decision as previously discussed, there is no statistically significant geographic pattern dollar to the amount of awards (despite the large variation seen in the C+R awards).

III. Nonfatal Respiratory Disease Cases

Two hundred and twenty-four of the 342 cases were correctly classified and completed for analysis. There were

60 misclassifications, 28 duplications, 6 incompletions, and 24 without an occupational injury award.

Type of injury claimed is compared to type of award decision and degree of disability in Table XVII. 24.2% of all cases were joined with some other type of injury; 75.7% of all cases claimed some degree of cumulative injury. Awards for <70% permanent disability were far more common than >70% permanent disability (63.5% vs 6.4%). In addition, 29.5% of all cases were awarded for temporary disability. The mean age for both the F+A and C+R groups by type of disability are as follows: temporary 35 years, <70% permanent disability 48 years, and >70% permanent disability 56 years.

The distribution of cases by employment categories for nonfatal respiratory disease cases is shown in Table XVIII. All public sector employees comprise 20.8% of all cases while 11% of all the cases were for public safety employees. The largest group of employees were manufacturing (41.0%), while trade and services had 11.5% and 12.5% respectively. The public safety employees were the only group in which the F+A type of award decision was more common than the C+R method. Other governmental employees (non-public safety) have an equal number of F+A and C+R decisions.

The type of defendant compared to the type of award decision is shown in Table XIX. Private insurance companies, defendants in 49.5% of all cases, had only 20% of their cases resolved by the F+A method. State Compensation Insurance Fund, defendant for 21% of the cases, had 32% settled by the F+A method. While the legally uninsured defendants represented only 4% of the cases, 90% of their cases were settled by the F+A method.

Table XX shows the type of award made in eight diagnostic categories of nonfatal respiratory disease. The major categories include: lung cancer, pneumoconiosis, asthma, chronic obstructive pulmonary disease (COPD), chemical pneumonitis, respiratory infection, sinusitis, and other. The more common diagnoses were: chronic obstructive pulmonary disease (26.4%), asthma (22.4%), and pneumoconiosis (12.9%). In addition, sinusitis or upper respiratory tract disease comprised 8.5% of all cases. The only diagnostic category in which F+A decisions were more frequent than C+R decisions was pneumoconiosis (7.1% vs 5.8%).

The evaluation of physician opinion regarding industrial causation for non-fatal respiratory disease cases is shown in Table XXI. The applicant attorney referred physician (AARMD) found evidence of industrial causation in 90.4% of the cases, found no evidence in 6.1% of the cases and made no statement in 3.5% of the cases. The defendant

attorney referred physician (DARMD) found evidence of industrial causation in 36.4% of the cases, found no evidence in 57.3% of the cases and made no statement in 6.3% of the cases. The patient's treating physician (TMD) found evidence of industrial causation in 61.0% of all cases, found no evidence in 7.0% of the cases and made no statement in 32% of the cases. There are statistically significant differences ($p < 0.01$) concerning evidence of industrial causation among the three physician groups (AARMD vs. DARMD, TMD vs. DARMD).

Table XXII shows the mean dollar and future medical benefits awards for type of award decision and category of disability. In general, the awards by the F+A method for all three categories of disability (temporary, <70% permanent, and >70% permanent) are greater than corresponding C+R awards. There were statistically significant differences (F+A vs C+R) for the temporary disability awards ($p < .02$) and <70% permanent disability awards ($p < 0.01$) but no statistical difference for the >70% permanent disability awards. The data show an increasing amount of award for increasing degree of disability. There is a highly significant difference ($p < .01$) in future medical benefit awards for the F+A cases compared to the C+R cases. 27.3% of the F+A temporary disability cases receive future medical benefits compared to only 7.3% of the C+R cases. For <70% permanent

disability 72.9% of F+A-decided cases received future medical benefits compared to 24% of the C+R cases. For 70% permanent disability 100% of F+A cases received future medical benefits awards compared to zero for C+R.

The comparison of permanent disability awards to public safety employees and to all other employees for non-fatal respiratory disease cases is shown in Table XXIII. The data show that the public safety employees received less money in all categories except F+A total disability than did all other employees. (There are no statistically significant differences, due in part to the small number of cases per category.)

The mean total award by geographic region for type of award decision and category of disability is examined in Table XXIV. While there are monetary differences in F+A vs. C+R cases, there is no consistent variation by region. The small number of cases in some categories makes statistical comparisons unmeaningful.

IV. Fatal Respiratory Disease Cases

Nineteen fatal respiratory cases were identified in the original computer list provided by the State. Two additional cases originally misclassified as nonfatal respiratory disease cases. Since one case received no award 20 cases are included in this analysis. Because the sample

size is so small, interpretation of the data is minimal for most parameters.

The type of injury compared to the type of award decision for fatal respiratory disease cases is shown in Table XXV. Ten percent of the cases were joined with some other injury. Eighty-five percent of all cases were settled by C+R method: 75% of all cases had some aspect of cumulative injury associated with them. The mean age for the F+A cases was 46 years and 53 years for the C+R cases.

Distribution of cases by employment category for types of award decisions is shown in Table XXVI. Public sector employees comprised 15% of all cases with public safety representing 10% of the total. Of the three cases settled by the F+A method one is from each category: mineral extraction, manufacturing and construction.

Table XXVII shows the type of defendants for fatal respiratory disease cases. Private insurance companies were defendants in 50% of the cases while State Compensation Insurance Fund was defendant in 30%. The legally uninsured employers were the defendant in no cases and the self-insured in 5% of the cases.

The specific diagnoses of the fatal respiratory disease cases is shown in Table XXVIII. Lung cancer cases represent 50% of all fatal respiratory disease cases. Five

percent of the cases were due to pneumoconiosis, 5% to asthma, and 10% to chemical pneumonitis. The remaining 30% were a variety of other respiratory diagnoses.

The evaluation of physician opinion regarding industrial causation is shown in Table XXIX. The applicant attorney referred physician found evidence of industrial causation in 100% of the cases. The defendant attorney referred physician found evidence of industrial causation in 17% of the cases, found no evidence in 67% of the cases and made no statement in 17% of the cases. The patient's treating physician found evidence of industrial causation in 38% of the cases, found no evidence in 8% of the cases and made no statement in 54% of the cases. Tests for statistical significance were nonsignificant primarily due to the small number of cases in each category.

Table XXX shows the mean dollar award by type of award decision for fatal respiratory disease cases. The total award was \$36,515 for the F+A cases and \$18,013 for the C+R cases. The difference is not statistically significant because of the small number of cases.

The comparison of mean total awards for public safety employees and all other employees by type of award decision for fatal respiratory disease cases is shown in Table XXXI. Since there were only 2 public safety

employees and both awards were settled by the C+R method, statistical comparison is not possible. The public safety employees each recieved \$1,000 by the C+R method, while all the other employees received an average of \$20,281 by the C+R method. For all the other employees the awards by the F+A method averaged \$36,515, compared to C+R awards averaging \$20,281.

The mean total awards by geographic region for type of award decision for fatal respiratory disease cases is shown in Table XXXII. While there are some monetary differences in specific categories, there are no overall geographic differentials.

DISCUSSION

We evaluated contested cardiovascular and respiratory disease cases that were completed (closed) between July 1974 and September 1975. The cases for study were those that appeared in the computerized file of the Department of California of Industrial Accidents for the Workers' Compensation Appeals Board for the two specific classifications, cardiovascular and respiratory. When a claim is filed, a WCAB employee assigned the case to a specific category. Once assigned to a category the case remains in that category no matter what the eventual outcome may be. Misclassification was a common occurrence; only 414 of the 543

non-fatal cardiovascular cases (76%) and 248 of 342 non-fatal respiratory disease cases (73%) were properly classified. This degree of misclassification raises serious questions about the utility and effectiveness of such a system, the quality of the information initially provided, and the capabilities of the classifiers.

Ideally, this study would have examined all claims filed for cardiovascular and respiratory disease, both contested and noncontested. However, as we previously mentioned, only data on the contested claims are available for study. (Since many of the diseases of these two systems tend to be complex in etiology, it is reasonable to assume that a high proportion of cases would be litigated). Hershenson, in discussing cumulative trauma in California (JOM 21:674-676, 1979), noted that 98% of cumulative injury cases were litigated. We have assumed that almost any case with claims of cumulative injury would be litigated. In addition, it has been assumed that almost all cases with some degree of permanent disability and all fatal claims would be contested, primarily because the disease processes for the majority of the cardiovascular and respiratory disease cases tend to be chronic in nature or to have a long latent period prior to the onset of clinical disease.

This study examined all completed contested cases which concluded with a monetary award. Table XXXIII shows

number and percentage of cases with and without awards for contested cardiovascular and respiratory disease claims. Only 5.9% of all contested cases resulted in no monetary payment. The category with the highest percentage of cases without awards was non-fatal respiratory disease with 9.7%. The category with the lowest percentage was nonfatal cardiovascular disease with 4.1%. Thus, 94% of all cardiovascular and respiratory disease contested cases received some monetary award.

The percentage of single system and joined claims for contested cardiovascular and respiratory disease cases is shown in Table XXXIV. Eighty-two percent of all claims were filed for injury to a single organ system. Only 18% were joined with some other type of injury. This would indicate that joined cases are a small, but not insignificant, minority of cases.

The types of injury claimed for contested cardiovascular and respiratory disease cases are summarized in Table XXXV. Specific injury accounted for 29.4% of the cases examined, while 44.4% involved cumulative injuries; an additional 26.2% had some combination of both a specific and cumulative injury. Altogether, thus, 70.6% of all cases involved some degree of cumulative injury. 89.3% of all cardiovascular disease cases were due to coronary artery disease. Sometimes a specific event (e.g., myocardial

infarction) was the diagnosis. In other cases the diagnosis was generalized coronary artery disease. In either case, coronary artery disease is a chronic process with multiple known risk factors such as uncontrolled hypertension, cigarette smoking, hyperlipidemia, diabetes, personality type, etc. Public safety employees have a legislated rebuttable presumption for development of heart trouble (heart diseases of any type) due, in part, to "occupational stress". The data show that public safety employee cases comprised a large portion of the contested cardiovascular disease cases, a percentage that was completely disproportionate to the numbers in the employed population.

Cardiovascular disease is a leading cause of death among U.S. males (approximately 40% of all deaths). If all men with coronary artery disease or other cardiovascular disease applied for workers' compensation one could expect up to 25-fold increase in claims. An equally significant increase in claims would occur if all men with self-perceived "occupational stress" who developed cardiovascular disease filed workers' compensation claims.

While public safety employees have a rebuttable presumption for the development of heart disease, 76.9% of their cases were settled by the Finding and Award (F+A) method. Even with agreement of causation (from the presumption), resolution of other factors such as extent of disa-

bility, apportionment, future medical benefits, etc, require a judge's decision. While the majority of the cases are settled by the F+A method, the monetary award for public safety employees is not greater than those granted to other employees settled by similar methods. However, because relatively more of their cases are settled by the F+A method, public safety employees, as a group, received more money per case than other employees. In addition, the vast majority of all nonfatal cardiovascular disease claims settled by the F+A method received future medical benefits. (This is potentially opened and could amount to a considerable sum over the lifetime of the individual).

In respiratory disease cases we did not find the predominance of a single type of diagnosis that was observed in the cardiovascular disease categories. The employment group with the largest number of cases was manufacturing. Public safety employees were not as disproportionately represented in the pulmonary disease cases as they were in the cardiovascular disease cases despite their presumption for the development of pneumonia.

Of the 20 fatal respiratory cases half were due to cancer. In addition, seven of the nonfatal cases involved respiratory cancer. Thus, there were 17 fatal and nonfatal respiratory cancer cases for which compensation was awarded during the study period.

In order to determine the magnitude of respiratory cancers occurring in California compared to the number of contested respiratory cancer claims occurring in the workers' compensation system, the following calculations can be done. The pulmonary cancer rate in the United States is 36 per 100,000 population. For the 8 million employed Californians 2,880 pulmonary cancers would be expected annually. To provide a guide to the possible numbers of occupationally-related pulmonary cancers, an evaluation of asbestos related pulmonary cancer cases may prove useful.

According to the California Tumor Registry, 25 mesotheliomas are seen annually in the five Bay Area counties. Mesotheliomas are indicators of asbestos exposure, primarily from work environments. Based on epidemiologic data from individuals with a history of having worked with asbestos, the ratio of mesotheliomas to asbestos related lung cancer is 1:5. Thus, 125 asbestos-related lung cancers would be expected to occur annually in the five Bay Area counties in addition to the 25 mesotheliomas (half pulmonary, half peritoneal). Only 17 contested pulmonary cancer cases (10 fatal and 7 nonfatal) were identified during the 15-month study period. Since much asbestos exposure has been due to shipbuilding and since the Federal Longshoremen and Harbor Workers' Law covers these workers, many asbestos cases will never reach the California Workers' Compensation

System. But there are many other known occupations with exposure to asbestos besides shipbuilding in the Bay Area. Thus, using asbestos data alone, we conclude that occupationally related respiratory cancer cases are grossly underfiled.

Asthma and chronic obstructive pulmonary disease (COPD) comprise virtually half (49%) of the nonfatal respiratory disease claims. In general, both of these diagnoses imply a chronic process. The few agents known to produce occupational asthma were identified as the causative agents in the asthma cases. In both these categories, the majority of claims asserted aggravation or acceleration of the underlying chronic disease process rather than sole cause.

While efforts were made to evaluate total costs per case the only cost factors available were the applicant's award. Defense costs are not contained in the WCAB file; thus, total medical/legal costs could not be determined.

The study showed that the monetary awards for both disease categories increased with the increasing severity of disability. While the F+A decisions were greater than the corresponding C+R decisions, few of the differences were statistically significant. Part of the lack of statistical significance was due to the (often) small number of cases per category.

The mean dollar award actually received by the applicant is summarized in Table XXXVI for permanent disability (<70% and >70%) and fatalities. For the Findings and Award category there appeared to be little difference between a >70% permanent disability award and an award for a fatality. This was not true for the Compromise and Release category where the fatal cases received considerably less money.

Apart from the moderate monetary advantages of the Finding and Award decision, the vast majority of individuals with any degree of permanent disability received future medical benefits; few individuals with a Compromise and Release decision received such benefits. Future medical benefit awards are provided to pay for the future medical costs associated with the disease process that was compensated, e.g., medical care for cardiac problems in heart cases, etc. The authors had no readily available method by which to estimate the financial impact on the defendant in such cases over the lifetime of the applicant. For an individual with a chronic disease, simple logic would conclude that the Finding and Award decision is more likely to meet the needs of an individual than is the Compromise and Release resolution. However in some cases the applicant may benefit from a C+R, for he might lose if the case were decided by a judge.

The defendant or carrier in a workers' compensation claim is liable for the medical costs of the individual claimant. In this study, such expenses would be included in "other medical-legal costs" (Tables VI, XIV, XXII, and XXX) and appear quite low. This suggests that the medical insurance carriers are paying medical care costs that should be paid by the Workers' Compensation defendant. Another explanation could be that the defendants have paid the medical bills in cases where causation is not an issue; thus, no provided lien is present within the file. Such payment without a lien would not be reflected in the file.

No significant difference in the amount of awards was found when public safety employees were compared to all other employees for either cardiovascular or respiratory disease. Nor was there any pattern of differences in amount of awards by geographic area.

The summary of the physician opinions regarding industrial causation for contested cardiovascular and respiratory disease cases is shown in Table XXXVII. For clarity's sake, only positive and negative responses are included in this table. The nonstated category has been omitted and can be found in Tables V, XIII, XXIII, and XXIX. The applicant attorney referred physician found evidence for industrial causation in 95% of the cases, and no evidence of industrial causation in 2.7% of the cases. The defendant

attorney referred physician found evidence of industrial causation in 28.7% of the cases and found no evidence of industrial causation in 64.3% of the cases. The treating physician found evidence of industrial causation in 43.2% of the cases and found no evidence of industrial causation in 8.7%. Generally in contested cases receiving awards it would appear that the judge accepted the opinion of the applicant attorney referred physician or the treating physician more often than the opinion of the defendant attorney referred physician.

CONCLUSIONS

The following general conclusions can be drawn from this study

- 1) The F+A award method provides more benefits than the C+R method;
- 2) The majority of cardiovascular and pulmonary claims are for a chronic condition;
- 3) The public safety officer are disproportionately represented in both categories, especially cardiovascular;
- 4) Despite the rebuttable presumption, the amount of public safety officer awards are similar to non-public safety employees;
- 5) The applicant-attorney referred physician usually found evidence of industrial causation and apparently this opinion was believed by the judge;
- 6) The amount of award increased with severity of disability;
- 7) The average amount of awards for >70% permanent disability or fatal cases never exceed \$40,000 and are frequently markedly lower;
- 8) No generalized geographic pattern to awards was present; and
- 9) The number of respiratory cancer claims was grossly underfiled.

Since this was one study in time, further research is needed to further define or clarify these results.

TABLE I

TYPE OF INJURY CLAIMED BY TYPES OF AWARD DECISION* AND CATEGORY OF DISABILITY** FOR NONFATAL CARDIOVASCULAR DISEASE CASES

Type of Injury Claimed	F & A		C & R		TOTAL %
	Temporary %	Permanent %	Temporary %	Permanent %	
Cardiovascular only	0.8	15.6	0.3	15.6	46.7
cumulative only	0.5	8.8	2.0	10.3	27.4
specific only	0.5	2.3	1.6	16.1	26.0
both					
TOTAL	1.8	26.7	3.8	42.0	8.7

N = 397

Source: State of California; WCAB 1974-1975

* = F+A or C+R

** = Temporary; Permanent Partial; Permanent Total

TABLE II
 EMPLOYMENT CATEGORIES COMPARED TO TYPE OF AWARD DECISION
 FOR NONFATAL CARDIOVASCULAR DISEASE CASES

TYPE OF AWARD DECISION

EMPLOYMENT CATEGORY	F & A (%)	C & R (%)	TOTAL (%)
Agriculture	0.5	0.9	1.4
Manufacturing	1.6	10.2	11.8
Construction	1.0	5.3	6.3
Trade	1.3	9.3	10.6
Service	1.7	12.6	14.3
Government: Non-Public Safety	8.2	9.8	18.0
Government: Public Safety	30.2	8.1	38.3

N = 397

Source: State of California; WCAB 1974-1975

TABLE III

TYPE OF DEFENDANT COMPARED TO TYPE OF AWARD DECISION FOR NONFATAL
CARDIOVASCULAR DISEASE CASES

TYPE OF AWARD DECISION

TYPE OF DEFENDANT	F & A (%)	C & R (%)	TOTAL (%)
State Compensation Insurance Fund	19.9	15.9	35.8
Private Insurance Company	3.6	28.9	32.5
Legally Uninsured	10.5	.9	11.4
Self-Insured	2.1	1.7	3.8
Multiple	9.2	7.3	16.5

N = 397

Source: State of California: WCAB, 1974-1975

TABLE IV
 DIAGNOSES BY TYPE OF AWARD DECISION FOR NONFATAL CARDIOVASCULAR DISEASE CASES

Type Of Award Decision

DIAGNOSIS	F & A (%)	C & R (%)	TOTAL (%)
Specific Myocardial Infarction	24.7	32.4	57.1
Generalized Coronary Artery Disease	14.3	14.3	28.6
Hypertensive Heart Disease	6.4	3.6	10.0
Other	0.3*	4.0	4.3

* One case

N = 397

Source: State of California: WCAB, 1974-1975

TABLE V
 PHYSICIAN OPINION REGARDING INDUSTRIAL CAUSATION FOR NONFATAL
 CARDIOVASCULAR DISEASE CASES

TYPE OF PHYSICIAN	YES (%)	NO (%)	NOT STATED (%)
Applicant Attorney Referred (n = 274)	96.0 ^{a,b}	2.2	1.8
Defendant Attorney Referred (n = 287)	29.2 ^{a,c}	64.6	5.4
Patient's Treating (n = 51)	45.4 ^{b,c}	7.8	52.7

For a, b, and c, p < 0.001

Source: State of California: WCAB, 1974-1975

TABLE VI

MEAN DOLLAR AND FUTURE MEDICAL BENEFITS AWARDS FOR TYPE OF DECISION
AND CATEGORY OF DISABILITY FOR NONFATAL CARDIOVASCULAR DISEASE CASES

TYPE OF AWARD DECISION
Category of Disability

MEAN DOLLAR AWARDS	<u>F & A</u>		<u>C & R</u>	
	Temporary Permanent (\$)	Permanent Permanent (\$)	Temporary Permanent (\$)	Permanent Permanent (\$)
Total (N=397)	3,052	15,484	12,596	30,132
Applicant (N=397)	2,448	13,990 ^a	10,608 ^a	26,058
Applicant Attorney (N=344)	346	1,411	1,346	2,709
Applicant Medical-Legal Evaluation (N=301)	425	458	422	550
Other Medical Costs (N=143)	23	555	1,150	2,185
PERCENT FUTURE MEDICAL CARE AWARD (N=397)	7.14	90.6 ^b	6.6 ^b	16.2 ^c

Source: State of California: WCAB, 1974-1975

a p<0.001

b p<0.001

c p<0.001

TABLE VII
 COMPARISON OF PERMANENT DISABILITY AWARDS OF PUBLIC SAFETY EMPLOYEES TO
 ALL OTHER EMPLOYEES FOR NONFATAL CARDIOVASCULAR DISEASE CASES

TYPE OF AWARD DECISION
 Category of Permanent Disability

EMPLOYEE GROUP	F & A		C & R	
	←70% (\$)	→70% (\$)	←70% (\$)	→70% (\$)
Public Safety Employees (N=155)	15,921	31,579 ^a	19,294	33,882
All Other Employees (N=242)	14,732	39,518 ^a	11,587	28,926

Source: State of Calif.: WCAB 1974-1975

a) p0.03

TABLE VIII

TOTAL AWARDS BY GEOGRAPHICAL REGION FOR TYPE OF AWARD DECISION AND CATEGORY
OF DISABILITY FOR NON-FATAL CARDIOVASCULAR DISEASE CASES*

TYPE OF AWARD DECISION
Category of Disability

GEOGRAPHICAL REGION	<u>F & A</u>		<u>C & R</u>	
	Temporary (\$)	Permanent (\$)	Temporary (\$)	Permanent (\$)
CENTRAL (N=58)	2,195	37,046	1,325	23,862
SOUTHERN (N=199)	2,699	32,285	2,380	28,005
NORTHERN (N=62)	3,423	32,267	567	32,938

Source: State of California: WCAB, 1974-1975

*Joined cases excluded

TABLE IX

TYPE OF INJURY CLAIMED COMPARED TO TYPE OF AWARD DECISION FOR FATAL
CARDIOVASCULAR DISEASE CASES

TYPE OF AWARD DECISION

TYPE OF INJURY	F&A (%)	C&R (%)	TOTAL (%)
Cumulative Only	6.8	18.4	25.2
Specific Only	11.6	32.0	43.6
Both	6.1	25.2	31.3
TOTAL	24.5	75.6	

Source: State of Calif.: WCAB, 1974-1975
N=147

TABLE X

EMPLOYMENT CATEGORIES COMPARED TO TYPE OF AWARD DECISION FOR FATAL
CARDIOVASCULAR CASES

TYPE OF AWARD DECISION

EMPLOYMENT CATEGORY	F & A (%)	C & R (%)	TOTAL (%)
Agriculture	0.7	1.4	2.1
Mineral Extraction	0	2.0	2.0
Manufacturing	1.4	12.9	14.3
Construction	0	7.5	7.5
Trade	2.7	16.3	19.0
Service	2.0	19.7	21.8
Government: Non-Public Safety	4.1	8.8	12.9
Government: Public Safety	13.6	6.8	20.4

Source: State of California; WCAB 1974-1975
N=147

TABLE XI

TYPE OF DEFENDANT BY TYPE OF AWARD DECISION FOR FATAL CARDIOVASCULAR CASES

TYPE OF AWARD DECISION

INSURANCE CARRIER	F & A (%)	C & R (%)	TOTAL (%)
State Compensation Insurance Fund	10.9	21.1	32.0
Private Insurance Company	4.8	40.1	44.9
Multiple	2.7	6.8	9.5
Legally Uninsured	3.4	2.0	5.4
Self-Insured	2.7	5.4	8.2

Source: State of California; WCAB 1974-1975
N=147

TABLE XII
 DIAGNOSES BY TYPE OF AWARD DECISION FOR FATAL CARDIOVASCULAR DISEASE CASES

DIAGNOSIS	TYPE OF AWARD DECISION			TOTAL (%)
	F & A (%)	C & R (%)		
Specific Myocardial Infarction	15.4	55.9		71.3
Generalized Coronary Artery Disease	7.0	17.5		24.5
Hypertensive Heart Disease	0.7*	0.7*		1.4
Other	1.4	1.4		2.8

* One case
 Source: State of California; WCAB 1974-1975
 N = 397

TABLE XIII

PHYSICIAN OPINION REGARDING INDUSTRIAL CAUSATION FOR FATAL
CARDIOVASCULAR DISEASE CASES

TYPE OF PHYSICIAN	YES (%)	NO (%)	NOT STATED (%)
Applicant Attorney Referred (N=55)	92.7 ^{a,b}	0	7.3
Defendant Attorney Referred (N=71)	12.7 ^a	77.4	9.8
Patient's Treating (N=89)	22.5 ^b	11.1	66.3

For a and b $p < 0.001$
Source: State of California; WCAB 1974-1975

TABLE XIV
 MEAN DOLLAR AWARDS FOR TYPE OF AWARD DECISION FOR FATAL
 CARDIOVASCULAR DEATH CASES

MEAN DOLLAR AWARD	AWARD TYPE	
	F&A (\$)	C&R (\$)
Total (N=147)	34589 ^a	16517 ^a
Applicant (N=147)	32056	14616
Applicant Attorney (N=130)	1827	1665
Applicant Medical- Legal Evaluation (N=60)	554	321
Other Medical Costs (N=23)	2094	1172
Other Costs (N=147)	1136	675

a p\$0.001
 Source: State of California; WCAB 1974-1975

TABLE XV

COMPARISON OF TOTAL AWARDS OF PUBLIC SAFETY EMPLOYEES TO ALL OTHER EMPLOYEES
FOR FATAL CARDIOVASCULAR DISEASE CASES

TYPE OF AWARD DECISION

EMPLOYMENT CATEGORY	F & A (\$)	C & R (\$)
PUBLIC SAFETY EMPLOYEES (N=30)	34,357	14,354
ALL OTHER EMPLOYEES (N=117)	34,878	16,729

Source: State of California; WCAB 1974-1975

TABLE XVI

TOTAL AWARDS BY GEOGRAPHICAL REGION FOR TYPE OF AWARD DECISION
FOR CARDIOVASCULAR DEATH CASES*

TYPE OF AWARD DECISION

REGION	F & A (\$)	C & R (\$)
Central (N=22)	35514	12569
Southern (N=83)	32966	19950
Northern (N=36)	34439	9294

Source: State of California; WCAB 1974-1975
*Joined Cases Excluded

TABLE XVII

TYPE OF INJURY CLAIMED COMPARED TO TYPE OF AWARD DECISION AND CATEGORY OF DISABILITY FOR NONFATAL RESPIRATORY CASES

TYPE OF AWARD DECISION
Nature of Disability

Injury Claimed	<u>F & A</u>		<u>C & R</u>		TOTAL %
	Temporary %	Permanent % ≥70%	Temporary %	Permanent % ≥70%	
Cumulative Only	2.2	13.4	8.9	23.7	51.6
Specific Only	1.8	5.4	10.3	4.9	23.7
Both	0.9	2.7	5.4	13.4	24.1
TOTAL	4.9	21.5	24.6	42.0	3.4

N=224

Source: State of California; WCAB 1974-1975

TABLE XVIII

EMPLOYMENT CATEGORIES COMPARED TO TYPE OF AWARD DECISION
FOR NONFATAL RESPIRATORY DISEASE CASES

EMPLOYMENT CATEGORY	F & A	C & R	TOTAL
Agriculture	0.4*	4.0	4.4
Mineral Extraction	0.4*	1.3	1.7
Manufacturing	9.3	31.7	41.0
Construction	1.3	6.2	7.5
Trade	1.3	10.2	11.5
Service	3.1	9.4	12.5
Government: Non-Public Safety	4.9	4.9	9.8
Government: Public Safety	8.4	2.6	11.0

*One case
N=224

Source: State of California; WCAB 1974-1975

TABLE XIX

TYPE OF DEFENDANT BY TYPE OF AWARD DECISION FOR NONFATAL RESPIRATORY
DISEASE CASES

TYPE OF AWARD DECISION

TYPE OF DEFENDANT	F & A (%)	C & R (%)	TOTAL (%)
State Compensation Insurance Fund	6.7	14.3	21
Private Insurance Company	9.3	40.2	49.5
Legally Uninsured	3.6	0.4	4
Self-Insured	4.5	4.0	8.5
Multiple	5.4	11.6	17

N=224

Source: State of California; WCAB 1974-1975

TABLE XX

DIAGNOSIS BY TYPE OF AWARD DECISION FOR NONFATAL RESPIRATORY DISEASE CASES

TYPE OF AWARD DECISION

DIAGNOSIS	F & A (%)	C & R (%)	TOTAL (%)
Lung Cancer	1.3	1.8	3.1
Pneumoconiosis	7.1	5.8	12.9
Asthma	6.3	16.1	22.4
Chronic Obstructive Pulmonary Disease (COPD)	6.3	20.1	26.4
Pneumonitis (Chemical)	2.7	6.3	9.0
Respiratory Infection	1.3	7.6	8.9
Sinusitis	1.8	6.7	8.5
Other	0.3*	4.0	4.3

N=224

Source: State of California; WCAB 1974-1975

TABLE XXI

PHYSICIAN OPINION REGARDING INDUSTRIAL CAUSATION FOR NONFATAL
RESPIRATORY DISEASE CASES

TYPE OF PHYSICIAN	YES (%)	NO (%)	NOT STATED (%)
Applicant Attorney Referred (N=113)	90.4 ^a	6.1	3.5
Defendant Attorney Referred (N=112)	36.4 ^{a,b}	57.3	6.3
Patient's Treating (N=110)	61.0 ^b	7.0	32.0

a,b, p<0.01

Source: State of California; WCAB 1974-1975

TABLE XXII

MEAN DOLLAR AND FUTURE MEDICAL BENEFITS AWARDS FOR TYPE OF AWARD DECISION AND CATEGORY OF DISABILITY FOR NONFATAL RESPIRATORY DISEASE CASES

TYPE OF AWARD DECISION
Nature of Disability

MEAN DOLLAR AWARDS	<u>F & A</u>		<u>C & R</u>	
	Temporary %	Permanent %	Temporary %	Permanent %
Total (N=224)	3372	9363	1756	6705
Applicant (N=224)	3175 ^a	8056 ^b	1384 ^a	5412 ^b
Applicant Attorney (N=203)	160	825	222	695
Applicant Medical-Legal Evaluations (N=158)	418	423	357	517
Other Medical Costs (N=116)	155	336	271	279
PERCENT FUTURE MEDICAL CARE AWARD (N=224)	27.3% ^c	72.9% ^d	7.3% ^c	4.2% ^d

a p<0.02
b,c,d p<0.01

Source: State of California; WCAB 1974-1975

TABLE XXIII

COMPARISON OF TOTAL AWARDS FOR PERMANENT DISABILITY FOR PUBLIC SAFETY EMPLOYEES AND ALL OTHER EMPLOYEES FOR NONFATAL RESPIRATORY DISEASE CASES

TYPE OF AWARD DECISION
Category of Permanent Disability

	F & A		C & R	
	←70% (\$)	→70% (\$)	←70% (\$)	→70% (\$)
Public Safety Employees (N=22)	7,610	39,315	5,461	14,000
All Other Employees (N=85)	10,239	32,300	6,746	30,630

Source: State of California; WCAB 1974-1975

TABLE XXIV

MEAN DOLLAR AWARDS BY GEOGRAPHICAL REGION FOR TYPE OF AWARD DECISION AND CATEGORY OF DISABILITY FOR NONFATAL RESPIRATORY DISEASE CASES*

TYPE OF AWARD DECISION
Category of Disability

REGION	<u>F & A</u>		<u>C & R</u>	
	Temporary (\$)	Permanent (\$)	Temporary (\$)	Permanent (\$)
CENTRAL (N=29)	2315	9777	1387	5140
SOUTHERN (N=106)	938	9856	1826	7397
NORTHERN (N=34)	19012**	9805	1851	2465

*Joined cases excluded

**One Case

Source: State of California; WCAB 1974-1975

TABLE XXV

TYPE OF INJURY CLAIMED COMPARED TO TYPE OF AWARD DECISION
FOR FATAL RESPIRATORY DISEASE CASES

TYPE OF INJURY	TYPE OF DECISION			TOTAL (%)
	F&A (%)	C&R (%)		
Cumulative only	5.0	50.		55
Specific only	5.0	20.		25
Both	5.0	15.		20

(N=20)
Source: State of California; WCAB 1974-1975

TABLE XXVI

EMPLOYMENT CATEGORIES COMPARED TO TYPE OF AWARD DECISION
FOR FATAL RESPIRATORY DISEASE CASES

2

EMPLOYMENT CATEGORY	F & A (%)	C & R (%)	TOTAL
Agriculture	0	5	5
Mineral Extraction	5	5	10
Manufacturing	5	25	30
Construction	5	25	30
Trade	0	5	5
Service	0	5	5
Government: Non-Public Safety	0	5	5
Government: Public Safety	0	10	10

Source: State of California; WCAB 1974-1975

TABLE XXVII

TYPE OF DEFENDANT FOR FATAL RESPIRATORY DEATH CASES

TYPE OF DEFENDANT	TOTAL (%)
State Compensation Insurance Fund	30
Private Insurance Company	50
Multiple	15
Legally Uninsured	0
Self-insured	5

Source: State of California; WCAB 1974-1975

TABLE XXVIII

DIAGNOSIS FOR FATAL RESPIRATORY DEATH CASES

DIAGNOSIS	#
Lung Cancer	50
Pneumoconiosis	5
Asthma	5
Chronic Obstructive Pulmonary Disease (COPD)	0
Pneumonitis (Chemical)	10
Respiratory Infection	0
Other	30

N=20
Source: State of California; WCAB 1974-1975

TABLE XXIX

PHYSICIAN OPINION REGARDING INDUSTRIAL CAUSATION FOR FATAL
RESPIRATORY DISEASE CASES

TYPE OF PHYSICIAN	YES (%)	NO (%)	NOT STATED (%)
Applicant Attorney Referred (N=7)	100	0	0
Defendant Attorney Referred (N=6)	17	67	17
Patient's Treating (N=13)	38	8	54

Source: State of California; WCAB 1974-1975

TABLE XXX

MEAN DOLLAR AWARD BY TYPE OF AWARD DECISION FOR FATAL RESPIRATORY CASES

MEAN DOLLAR AWARDS	TYPE OF DECISION	
	F&A (\$)	C&R (\$)
Total (N=20)	36,515	18,013
Applicant (N=20)	32,728	16,115
Applicant Attorney (N=20)	2,400	1,538
Applicant Medical- Legal Evaluations (N=7)	153	387
Other Medical Costs (N=4)	2,800*	262

N=20

Source: State of California; WCAB 1974-1975

*One case

TABLE XXXI

COMPARISON OF MEAN TOTAL AWARDS FOR PUBLIC SAFETY EMPLOYEES AND ALL OTHER EMPLOYEES BY TYPE OF DECISION FOR FATAL RESPIRATORY DISEASE CASES

	TYPE OF DECISION		
	F&A (\$)	C&R (\$)	
Public Safety Employees (N=2)	0	1,000	
All Other Employees (N=18)	36,515	20,281	

Source: State of California; WCAB 1974-1975

TABLE XXXII

MEAN TOTAL AWARDS BY GEOGRAPHICAL REGION FOR TYPE OF DECISION
FOR FATAL RESPIRATORY DEATH CASES

REGION	TYPE OF DECISION	
	F&A (\$)	C&R (\$)
Central (3)	32,273	38,140*
Southern (11)	45,000*	14,959
Northern (6)	0	19,750

Source: State of California; WCAB 1974-1975

*one case

TABLE XXXIII

NUMBER AND PERCENTAGE OF CASES WITH AND WITHOUT AWARDS FOR CONTESTED
CARDIOVASCULAR AND RESPIRATORY CLAIMS

<u>Disease Category</u>	<u>Total Acceptable Cases</u>	<u>Cases with Awards</u>	<u>Cases Without Awards</u>	<u>Percentage of Cases without Awards</u>
Nonfatal Cardiovascular	414	397	17	4.1
Fatal Cardiovascular	154	147	7	4.5
Nonfatal Respiratory	248	224	24	9.7
Fatal Respiratory	<u>21</u>	<u>20</u>	<u>1</u>	<u>4.8</u>
Total	837	788	49	5.9

Source: State of California; WCAB 1974-1975

TABLE XXXIV

PERCENTAGE OF SINGLE SYSTEM AND JOINED CLAIMS FOR CONTESTED CARDIOVASCULAR AND RESPIRATORY CASES

<u>Disease Category</u>	<u>Single System (%)</u>	<u>Joined (%)</u>
Nonfatal Cardiovascular (N=397)	80	20
Fatal Cardiovascular (N=147)	97	3
Nonfatal Respiratory (N=224)	75	25
Fatal Respiratory (N=20)	<u>90</u>	<u>10</u>
Total	82	18

Source: State of California; WCAB 1974-1975

TABLE XXXV

PERCENTAGE OF TYPE OF INJURY CLAIMED FOR CONTESTED CARDIOVASCULAR
AND RESPIRATORY DISEASE CASES

Disease Category	Specific only (%)	Cumulative only (%)	Both (%)
Nonfatal Cardiovascular (N=397)	27	47	26
Fatal Cardiovascular (N=147)	44	25	31
Nonfatal Respiratory (N=224)	24	52	24
Fatal Respiratory (N=20)	<u>30</u>	<u>50</u>	<u>20</u>
Total	29.4	44.4	26.2

Source: State of California; WCAB 1974-1975

TABLE XXXVI

AMOUNT OF APPLICANT AWARD FOR PERMANENT DISABILITY OR FATAL CONTESTED
CARDIOVASCULAR AND RESPIRATORY DISEASE CASES

Disease Category	F & A		C & R	
	←70% (\$)	→70% (\$)	←70% (\$)	→70% (\$)
Nonfatal Cardiovascular	13,990	31,041	10,608	26,058
Fatal Cardiovascular	---	32,056	---	14,616
Nonfatal Respiratory	8,056	30,079	5,412	24,414
Fatal Respiratory	---	32,728	---	16,115

Sources: State of California; WCAB 1974-1975

TABLE XXXVII

PHYSICIAN OPINION AS TO INDUSTRIAL CAUSATION FOR CONTESTED CARDIOVASCULAR AND RESPIRATORY DISEASE CASES*

Disease Category	Applicant Attorney Referred		Defendant Attorney Referred		Treating	
	YES %	(NO) %	YES %	(NO) %	YES %	(NO) %
Nonfatal Cardiovascular	96	(2)	29	(65)	45	(8)
Fatal Cardiovascular	98	(0)	13	(77)	23	(11)
Nonfatal Respiratory	91	(6)	36	(57)	61	(7)
Fatal Respiratory	100	(0)	66	(17)	38	(8)
TOTAL	95	2.7	28.7	64.3	43.2	8.7

*Not state category omitted
Sources: State of California; WCAB 1974-1975