

Workers' Compensation System in Hawaii



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PREFACE

This report is part of READ's efforts toward enhancing understanding of Hawaii's Economy through comprehensive research and analysis of current economic issues facing policymakers and business communities. The report was prepared by Drs. Binsheng Li and Khem Raj Sharma of Economic Research Branch, under the direction of Dr. Pearl Imada Iboshi, the Division Head. The authors are thankful to Gary Hamada and John P. Hardway of the Department of Labor Industrial Relations and J. P. Schmidt, Insurance Commissioner, for their constructive comments and feedback on the draft report.

TABLE OF CONTENTS

PREFACE	ii
LIST OF TABLES	iv
LIST OF FIGURES	iv
EXECUTIVE SUMMARY	v
1. INTRODUCTION	1
2. DISCRIPTION OF WORKERS' COMPENSATION SYSTEM AND COMPARISON OF BENEFIT LEVELS	3
2.1. The Goals of the Workers' Compensation System	3
2.2. Description of the Hawaii Workers' Compensation System and Comparison of Benefit Levels	4
3. HISTORICAL PERFORMANCE	19
3.1. Data and Measurement	19
3.2. The Gap Between Employer Cost and Employee Benefit	21
3.3. Comparison of Benefit Levels	23
3.4. National Premium Rate Ranking	25
3.5. Historical Trends of Workers' Compensation Benefit	25
3.6. Historical Trends in Workers' Compensation Cases and Average Benefit per Processed Case	27
3.7. Historical Trends of Workers' Compensation Lost Work Days	30
3.8. Historical Growth of Workers' Compensation Benefit by Category	31
4. COMPARISON OF COST CONTAINMENT STRATEGIES	34
4.1. Areas for Cost Containment and Cost Drivers	34
4.2. Comparison of Medical Cost Containment Strategies	36
4.3. Comparison of General Cost Containment Strategies	40
5. REFORM PROPOSALS AND POLICY RECOMMENDATIONS	46
5.1. The DLIR Proposed Legislative Changes.....	46
5.2. Other Proposed Legislative Changes	53
5.3. The DLIR Proposed Administrative Rule Changes	60
5.4. The DLIR Internal Changes and New Initiatives	61
5.5. The Recent Reform to California's WC System	63
5.6. Conclusions and Policy Recommendations	65
REFERENCES	68

LIST OF TABLES

Table 1. Hawaii Workers' Compensation Cost by Category: 1990-2006.....	32
Table 2. Hawaii Workers' Compensation Cases by Category: 1990-2006	32
Table 3. Hawaii Workers' Compensation Average Cost by Category: 1990-2006	33

LIST OF FIGURES

Figure 1. Shares in Total Workers' Compensation Benefit: Average 1990-2006	11
Figure 2. Comparison of WC Loss Ratios	22
Figure 3. Comparison of Average Benefit per Covered Worker	23
Figure 4. Comparison of Hawaii and U.S. WC Average Benefits	24
Figure 5. Hawaii Workers' Compensation Total Benefit.....	26
Figure 6. Hawaii Reported Workers' Compensation Cases	28
Figure 7. Processed WC Cases with Cost and Reported WC Cases: 1990-2006	29
Figure 8. Average Benefit Per Processed WC Case with Cost: 1990-2006	30
Figure 9. Hawaii Workers' Compensation Days Lost.....	31

EXECUTIVE SUMMARY

The workers' compensation (WC) program is an important part of American social insurance. In 1915, the Hawaii Territorial Legislature adopted the first WC law in Hawaii. Under this law, employees who were injured or disabled on the job were provided with medical treatment and a fixed monetary compensation.

Hawaii's total WC cost (the benefits paid to the injured workers by self insured employers and insurance carriers) increased almost 14 times from about \$24 million in 1977 to \$343 million in 1994. To control this rapid increase in Hawaii's WC cost, Act 234 and Act 261 were passed in 1995 and 1996, respectively. Act 234 set the WC charges at 110 percent of Medicare Medical Fee Schedule and allowed the Director of Hawaii State Department of Labor and Industrial Relations (DLIR) to make adjustments upon determining that specific fees allowed under Medicare were not reasonable, while Act 261 was to establish the Hawaii Employer Mutual Insurance Company (HEMIC) to provide WC coverage not only to high-risk employers, but also to small business employers who were unable to obtain insurance otherwise.

The cost of the WC program is covered fully by the employers. The insurance premiums paid by employers are used not only to cover total compensation costs, but also to cover the expenses to administer the system and the profits for insurance carriers. Based on the available data, however, it is not possible to break down total employer costs into administrative expenses and profit of insurance carriers.

After 1994, Hawaii's WC costs decreased significantly, but these decreases were not translated into corresponding decreases in total employer costs. From 1994 to 2006, total employee benefits or compensation costs paid by the insurance carriers with active licenses with DCCA (called direct losses paid in the DCCA report) decreased more than half (55 percent) from \$243 million to \$109 million, while total employer premiums (called direct premiums written) decreased only slightly (less than 2 percent) from \$362 million to \$356 million.¹

¹ In the Report of Insurance Commissioner of Hawaii, both direct losses paid and direct losses incurred values are provided. The incurred costs for any premium year are estimated based upon claims during that year. The direct losses incurred were higher than the direct losses paid in most of the recent years. For example, the direct losses incurred in 2006 was about \$140 million, compared to the \$109 million direct losses paid in the same year. In this study, the direct losses paid were used to represent the employee benefits received. It should be noted that the insurance premiums received by the insurance carriers are not the total costs of employers due to the deductible option for medical benefits in insurance policy. If an insured employer exercises this option and chooses a deductible, the insured employer shall be liable for the amount of the deductible instead.

The gap between total employers' costs and total compensation costs is measured by the "loss" ratio, which is calculated as the ratio between total employee benefits and total employer costs. During 1994-1998, Hawaii's loss ratio for private insurance carriers was close to that of U.S. private carriers, but the gap increased since 1999. In 2005, the Hawaii private carrier loss ratio was only about 57 percent of that of the U.S. as a whole.² The large and increasing gap between employer costs and employee benefits for the private insurance carriers (i.e., decline in the loss ratio) in Hawaii can be explained by three possible factors, namely increased administration costs of private insurance carriers, increased reserves retained by insurance carriers to pay for expected future claims, and increased profitability of insurance carriers.³ The available information does not support the need to increase reserves as the reason that the loss ratio decreased. Thus, the growing gap between employer costs and employee benefits (i.e., declining loss ratio) could be attributed to increased profitability or increased administrative costs or both. A more detailed study is needed to determine the specific reasons for a low and declining loss ratio in Hawaii.

According to the *Workers' Compensation Data Book* prepared by DLIR, Hawaii's total WC costs (or employee benefits) can be grouped into nine categories: (1) temporary total disability (TTD), (2) temporary partial disability (TPD), (3) permanent total disability (PTD), (4) permanent partial disability (PPD), (5) death, (6) disfigurement, (7) vocational rehabilitation, (8) attendant services, and (9) medical. Among the nine categories, on average between 1990 and 2006, medical benefit accounted for the largest share (39.4 percent) in Hawaii's total WC costs, followed by PPD (26.0 percent), TTD (23.9 percent), and PTD (5.8 percent). These four categories accounted for more than 95 percent of the total WC cost in Hawaii during 1990-2006.

Hawaii's total WC employee benefits paid decreased since 1994, but average benefits were still higher than the U.S. as a whole. In 2005, the average WC benefit per \$100 of covered wages in Hawaii was about 21 percent higher than that for the U.S.

On a per covered worker basis, the difference in benefit between Hawaii and the U.S. was somewhat smaller. In 2005, the total average WC benefit per covered worker in Hawaii was

² Comparison with the U.S. is for 2005, the latest year for which the national data were available when this report was prepared.

³ Please note that the Hawaii loss ratio is calculated based on the direct losses paid. If the direct losses incurred were used to calculate the loss ratio, the Hawaii loss ratio in 2006 would be 39.2 percent rather than 30.7 percent.

only about 6 percent higher than for the U.S. However, the average medical benefit per worker was about 15 percent lower in Hawaii.

Medical benefits accounted for the largest share of total WC benefits. In 2005, the share of medical benefits in total WC benefits was 38.9 percent in Hawaii, significantly lower than the U.S. average of 48.8 percent. The second highest benefit category in Hawaii was the permanent partial disability (PPD) benefit. In 2002 (the latest year for which the comparable data were available) the share of PPD benefits in total WC benefits was 37.0 percent for the U.S., as compared to 24.3 percent in Hawaii. The third largest benefit category in Hawaii was the temporary total disability (TTD) benefit, accounting for 22.6 percent of total Hawaii WC benefits during 1990-2006. In 2002, total temporary disability benefits (including TTD and TPD) accounted for only about 11 percent of total WC benefits in the U.S., as compared to about 25 percent in Hawaii.⁴

According to a study prepared by the Council of State Governments, the most commonly adopted strategies of containing medical costs in the U.S. include: (1) employer choice of physician laws, (2) health care provider networks, (3) medical fee schedules and mandated bill review, (4) treatment guidelines and utilization reviews, (5) case management, and (6) promotion of generic drugs. In addition to the strategies targeted at preventing injuries and decreasing medical costs, there are also some general cost containment strategies. These include: (1) deregulation and competitive premium rates, (2) alternative insurance options such as self-insurance and pooled insurance, (3) advisory councils, (4) technological innovations, (5) streamlined WC systems for state employees, (6) fraud prevention, and (7) curbing litigation in the WC systems. Some of these strategies are already adopted in Hawaii.

This study focuses on recommendations consistent with the goal of minimizing employers' costs and improving benefits to injured workers when possible. The following major conclusions and recommendations are provided.

1. The gap between WC employer cost paid and employee benefits received in Hawaii is significantly larger than the national average. In addition, the gap in Hawaii has been increasing over time. Reducing this gap should be the focus of the WC system reform in

⁴ Inclusion of vocational rehabilitation costs in TDD benefit may have caused the share of TDD benefit in total benefits to be higher in Hawaii than in the U.S.

Hawaii. The first step toward reducing the gap would be a more detailed analysis to identify the specific reasons for a low loss ratio in Hawaii.

2. The low loss ratio seems to indicate that the WC insurance carriers in Hawaii are either more profitable and/or less efficient than the nation as a whole. According to a study conducted by the Workers' Compensation Center, Michigan State University (Welch, 2007), Hawaii ranked the 4th highest in the U.S. in terms of the profitability of WC insurance carriers in 2005. The WC insurance carriers' return on net worth was estimated at 16.7 percent for Hawaii vs. 9.6 percent for the U.S. as a whole. More detailed studies are needed to determine whether the low loss ratio is due to high profitability among WC insurers in Hawaii or due to other factors, such as increased administrative costs and increased reserves.
3. The enactments of Act 234 in 1995 and Act 261 in 1996 seem to have contributed to control the rapid increase in WC employee benefits in Hawaii since 1995.
4. On a per \$100 of covered wages basis, Hawaii's average total WC benefit level is higher than the national average. On a per covered worker basis, however, Hawaii's average total benefit is close to the national average, while Hawaii's average medical benefit is below the national average. The share of total temporary disability (TTD) in total benefit is found to be significantly higher in Hawaii compared to the nation. A detailed study is needed to determine as to why Hawaii's TTD share is so high.
5. The two administrative rule changes by DLIR, namely improving the WC hearing process by providing clear directives on the hearing process, and instituting evidence-based medical treatment guidelines by adopting Chapters of the American College of Occupational and Environmental Medicine Practice Guidelines and the Official Disability Guidelines) approved by the Governor in 2005, but later nullified by the Legislature, would have improved the WC system in Hawaii.
6. The DLIR internal changes and new initiatives to improve the WC system in Hawaii should be supported because these changes are consistent with the operating goals of the WC system. Decreases in total WC costs in Hawaii since 2003 may be due to the DLIR internal changes and initiatives to improve the WC system.

7. Hawaii should consider establishing a labor-management advisory council to minimize the conflict between competitive parties in WC system and to include them in the policy-making process. The Wisconsin's advisory council might be used as a model for Hawaii.
8. The recent reforms to California's WC system have achieved some success in reducing WC costs in that state. Many of the reforms adopted in California have already been adopted in Hawaii, but some measures, especially the measure to establish a more objective permanent disability rating schedule, should be considered. .

1. INTRODUCTION

This study provides an evaluation of Hawaii's workers' compensation (WC) system. Section 2 briefly describes the current WC system in Hawaii, including its goals and major components. Employer cost and employee benefit levels are also compared between Hawaii and other states in the U.S. in Section 2. Section 3 analyses the performance of the Hawaii's WC system in terms of two simple questions: (1) is the system facing a crisis and therefore in need of immediate major reforms; and (2) if such reforms are needed, where should we focus our attention. Various WC cost containment strategies adopted in Hawaii and other states are reviewed in Section 4. Recent proposed legislative changes, administrative rule changes, and new initiatives relating to Hawaii's WC system are examined in Section 5. Also included in this section is discussion of the recent reforms to California's WC system. Finally, the last section summarizes the findings and identifies some possible areas of reforms to Hawaii's WC program.

The WC program is an important part of American social insurance. The first WC law in the U.S. was enacted in 1908 to cover certain federal civilian workers. For non-federal workers, the WC statutes are enacted and administered at the state level. The first state laws were passed in 1911. In 1915, the Hawaii Territorial Legislature adopted the first WC law in Hawaii. Under this law, employees who were injured or disabled on the job were provided with medical treatment and fixed monetary compensation (indemnity). The cost of the WC program is covered completely by the employers. Under Hawaii's current law, all employers, including the State and County governments (the Federal government workers are excluded from the state WC system), employing one or more workers are required to have a workers' compensation coverage.

In 1972, mandated by Congress, the National Commission of State Workmen's Compensation Laws issued an historical report that changed the face of the WC system. In that report, the commission made nineteen "essential recommendations" to states for improving their WC systems. Most of these recommendations involved the expansion of coverage and benefits. Many states adopted some or most of the recommended provisions during the 1970s and 1980s. As states adopted the reforms, they also recognized that expanding coverage and benefits would increase costs. By the early 1990s, cost containment became the main focus of reform debates in most states (Victor et al., 1992). In Hawaii, the total WC compensation cost did not increase substantially until 1978. After this period until 1994, however, total WC compensation cost

increased almost 14 times from about \$24 million in 1977 to \$343 million in 1994. After 1994, total WC cost decreased significantly in Hawaii.⁵

The rapid growth of WC cost from the late 1970s until the early 1990s caused serious concern among Hawaii's employers, especially small business owners. Under the overwhelming pressure from both Hawaii's small business owners and labor officials, there have been two major attempts in the 1990s to reform the state's WC system. In 1995 Act 234 was enacted to control medical costs by establishing a medical fee schedule, which generally limits the reimbursement rate for medical services at 110 percent over the Medicare rate. This act also provided clear guidelines as to what constitutes fraud and established fraud penalties, and provided employers with incentives for safety and health programs to reduce workplace injuries. In 1996, Act 261 was enacted to establish the Hawaii Employer's Mutual Insurance Company (HEMIC) to provide WC coverage not only to high-risk employers, but also to small business employers who were unable to obtain insurance otherwise.

In recent years, further reforms to Hawaii's WC system have been proposed. Since 2003, the DLIR has made the WC system reform a high priority and implemented various programs, including: (1) identifying the cost drivers and areas for improvement, (2) improving DLIR's internal operations, and (3) recommending legislative proposals to reform Hawaii's WC Law. The DLIR submitted an omnibus WC reform package to the 2004 and 2005 Legislatures that addressed several key cost drivers identified by its internal study. Both omnibus bills were rejected in their entirety by the Legislature (DLIR, 2007). Besides DLIR's proposals, other legislative proposals to reform the WC system have also been considered. The major legislative proposals are summarized in Section 5 of this study.

⁵ The compensation cost, also referred as employee benefits in this study, is the cost incurred to cover the medical expenses and cash benefits paid out to the injured workers. The compensation cost is, however, only part of total employer cost. The employer cost also includes the administrative costs and profits of the insurance carriers. Since information on total employer cost is not available in Hawaii, compensation cost is used in this report.

2. DESCRIPTION OF WORKERS' COMPENSATION SYSTEM AND COMPARISON OF BENEFIT LEVELS

2.1. The Goals of the Workers' Compensation System

The WC system was introduced to provide medical and financial assistance to workers injured or disabled on the job. The commonly cited goals of the WC system in the WC literature include: (1) promote injury prevention, (2) provide timely and quality medical service to the injured workers, (3) provide adequate and equitable benefits for injured workers, (4) provide timely and non-litigious delivery of benefits, (5) promote speedy return to work, and (6) control the cost of administering the system, which is paid by the employers (Victor et al. 1992). Obviously, some of these goals are contradictory. For example, increasing benefits to the injured workers would increase the employers' cost. As a result, policy makers and administrators of the system often face a trade-off between the conflicting goals of the system.

Typically, the WC system involves four major parties: (1) the injured workers, who directly benefit from this system, (2) the employers, who pay for the costs of the system, (3) the third party (including the insurance carriers, the medical service providers, and the attorneys), who facilitate and manage the delivery of benefit and the operation of the system and may indirectly benefit from the system (generate revenue and profit from services provided), and (4) the policy makers, government administrators, and officers in charge of the operation of the system.

In this study, the injured workers and employers are designated as the "primary" parties. Although the WC system is not intended to be profit-driven, some third parties do profit from the system, sometimes at the expense of the primary parties.

Two main operating goals of the WC system are used to evaluate proposed changes in this study. The first one is to maximize the injured workers' benefit without increasing the cost to the employers. The second one is to minimize the employers' cost without decreasing the benefits to the injured workers. To the degree that the policies are able to achieve both of these goals there is a win-win case of reducing the employer cost and increasing the benefit to injured workers.

It should be noted that there is a large gap between the employers' cost and the benefit received by the injured workers. For example, in 2006, the total WC premiums paid by the employers (employer cost) covered by the insurance carriers with active license with the State of

Hawaii Department of Commerce and Consumer Affairs (DCCA) totaled about \$356 million. However, in comparison, the losses, claims and benefits paid by the insurance carriers to the injured workers (employee benefit received) totaled only about \$109 million. This was only 30.7 percent of total employers' cost. In reality, the actual benefits received by the injured workers can be even lower than the reported benefits because some of the cash benefits they receive are used to pay for attorneys and other litigation expenses. An attorney may charge an injured worker up to one-third of the cash benefit received. Therefore, the actual gap between the employer cost and the employee benefit may be even larger. This gap represents the administrative costs, such as claim management expenses, other operating expenses, taxes, and profit margins of the insurance carriers. Reducing this gap is consistent with the operating goals defined in this study.

This study focuses on recommendations consistent with the goal of minimizing employers' costs and improving benefits to injured workers when possible. When the comparable data are available, the WC cost and benefit levels are also compared between Hawaii and other states in the U.S. However, the intent is not to imply that a certain level of benefit or cost is ideal. Determining the "reasonable" level of benefit is a policy issue which is beyond the scope of this study. Therefore such issues as "should we increase the indemnity benefits" or "should we increase or decrease the allowed number of treatments per injury" are not being addressed in this study. Although important, the answers to these issues are often more political than economic. Against this backdrop, the following is a description of the Hawaii's WC system and a comparison of cost and benefit levels between Hawaii and other states.

2.2. Description of the Hawaii Workers' Compensation System and Comparison of Benefit Levels

General Description of the WC System

The WC system provides benefits to workers who are injured on the job or contract a work-related illness (to be referred as "injured workers" hereafter). Before the WC laws were enacted, an injured worker's only legal remedy for a work-related injury was to bring a tort suit against the employer and prove that the employer's negligence caused the injury. Under the tort system, workers often did not recover all damages and always experienced delays or high costs. The employers were also at risk for substantial and unpredictable losses if the workers' lawsuits

were successful. Moreover, litigation created friction between employers and workers. Ultimately, both employers and employees favored legislation to insure that an injured worker would receive predictable compensation without delay, irrespective of who was at fault. Under the exclusive remedy concept, the worker accepts workers' compensation as payment in full and gives up the right to sue the employer (Sengupta et al., 2007). Therefore, the creation of the WC system reflects a balance of two conflicting interests, thereby creating a win-win situation for both the employees and the employers.

The WC programs are designed and administered by individual states. The programs vary across states in terms of who is allowed to provide insurance, which injuries are compensable, and the level of benefits paid to the affected workers. Generally, the state laws require employers to obtain insurance or prove that they have the financial ability to carry their own risk (self-insurance). The WC data provided by the National Academy of Social Insurance (NASI) include benefits under three types of insurers: (1) private carriers, (2) state funds, and (3) self-insured. In 2005, total benefits paid by private carriers, state funds, and self-insured employers accounted for 54.0 percent, 20.7 percent, and 25.3 percent, respectively, of total WC benefits paid in the U.S. (Sengupta et al, 2007). Hawaii has no WC state fund. The state and county employees are included in the self-insured category. The Workers' Compensation Special Compensation Fund (SCF), which may have been treated as the state fund in the NASI study, was originally established as a second injury fund to cover delinquent employers. However, with enactment of the Benefit Adjustment provision under HRS 386-35 in 1980 to provide "cost of living adjustments" to permanently and totally disabled recipients every 10 years, over 50 percent of SCF payments currently go to this benefit (DLIR, 2008).

In Hawaii, the Disability Compensation Division (DCD) of the DLIR is primarily responsible for the administration of WC program in the state. The DCD is composed of four primary branches, namely Cost Review Branch, Hearings Branch, Enforcement Branch, and Records and Claims Branch. The Cost Review Branch reviews and monitors health care providers and their treatment plans to ensure that the medical care and services provided are necessary and appropriate. The Hearings Branch is responsible for conducting informal hearings and adjudicating disputes over treatment plans and other health care provider disputes. The Enforcement Branch enforces compliance with the WC law (mostly focusing on insurance coverage) through its investigation section. The Records and Claims Branch is further divided

into three sections, viz., Insurance Section, Vocational Rehabilitation Section, and Facilitator Section. The Insurance Section manages insurance policies, endorsements, expirations and cancellations, and employer compliance with insurance coverage requirements. The Vocational Rehabilitation Section is responsible for reviewing and approving rehabilitation providers' plans for injured workers, certifying rehabilitation agencies, and referring workers to rehabilitation providers and monitoring worker progress. The Facilitator Section responds to inquiries from workers, insurers, employers, providers, and attorneys, and educates workers on their rights and benefits under the law.

Disputed issues can be resolved voluntarily without the intervention of the DCD. To prevent unnecessary disputes, the DCD provides certain types of information to help constituents understand their rights and responsibilities under the law. Two WC facilitators and a clerk located at DCD headquarters provide information and assistance to unrepresented workers, employers, insurers, service providers, union agents, and attorneys. Disputes that cannot be resolved voluntarily can be resolved through the DCD's dispute resolution process, through the administrative appellate review process at the Labor and Industrial Relations Appeals Board (LAB), and ultimately by the Hawaii Supreme Court. The LAB consists of three board members appointed for 10-year terms by the Governor, with the advice and consent of the Senate.

Hawaii is one of a handful of states (along with Nevada, New York, and Ohio) that hold informal hearings to resolve WC disputes. Informal hearings enable the DCD to conduct over 2,500 hearings annually to resolve disputes. The DCD currently has 23 hearings officer positions statewide. Formalizing the process will result in longer hearings, more legal requirements for a formal record and will result in requiring many more hearings officers to maintain a current workload. Parties usually use Form WC-77 (Request for Hearing) to request an informal hearing. Once a request for hearing is filed, staff members in the DCD's hearing branch review the case file and request medical records and other documentation. When the file is complete, a scheduler prioritizes cases. Priority hearings are usually set about six weeks in the future. The purpose of a hearing is to resolve an issue by agreement or decision. Based on DCD data, about 55 percent of workers are represented by an attorney at the initial hearing. In calendar year 2004, the DCD held 2,614 hearings, accounting for about 4.1 percent of WC cases in that year. WC settlements arising out of alternative dispute resolution must be approved by the DCD. The DCD approves approximately 7,000 settlements annually. These settlements are

agreed upon without the DCD intervention and are reviewed by the DCD to ensure compliance with the WC law.

Compared with other states, the initial indemnity payments are relatively prompt in Hawaii. According to a study by the Worker's Compensation Research Institute (Ballantyne, 2006), the median interval from the date of injury to the first indemnity benefit payment in Hawaii was 18 days in 2001, compared with 30 days for the median to 40 jurisdictions. Hawaii tied with Oregon in having the shortest median interval.

Overall, the speed of dispute resolution in Hawaii is faster than in the typical state that the WCRI has studied in the past 10 years. The average interval from the request for a hearing to a hearing and decision was 162 days (5.3 months) in Hawaii in 2004. This interval included an average of 50 days from filing the hearing request to the transferring the case to the DCD's review section, an additional 71 days to a hearing being held, and another 41 days for the decision to be issued after a hearing. The 5.3-month interval in Hawaii was shorter than in seven of nine other states (for which comparable data were available) that have been the subject of WCRI Administrative Inventories in the past 10 years (Ballantyne, 2006).

Appeals to DCD hearing officers' decisions are reviewed by the LAB. Most of these appeals are settled, dismissed, or withdrawn without a trial being held. In fiscal year 2004, 646 appeals were filed with the LAB, but only 60 trials were held. If the case goes to a trial, the LAB usually conducts a trial *de novo* based on the presentation of documentary and testimonial evidence, briefs, and new evidence not heard at the initial hearing. The LAB does not rehear the case; rather, it reviews the proposed decision and any exceptions and either adopts or amends the proposed decision based on the evidence presented. Further appeals can be taken to the Hawaii Supreme Court. In fiscal year 2004, 29 appeals were filed with the Hawaii Supreme Court (Ballantyne, 2006).

In Hawaii, the Insurance Commissioner at the Department of Commerce and Consumer Affairs (DCCA) is responsible for approving the rate and classification of all WC insurers in the state.

The WC program is financed almost exclusively by employers. The premiums paid by employers are based in part on their industry classifications and the occupational types of their workers. Many employers are also experience-rated, which can result in higher (or lower) premiums. The employer cost of WC program is not only affected by the benefits received by

the employees, but also by other factors, such as schedule rating, dividends, administrative expenses to manage the system, and profits of insurance carriers.

The gap between employer cost and employee benefit is commonly measured in terms of a “loss” ratio, which is defined as the ratio between total employee benefits and total employer costs. In 2005, the loss ratio was 62.3 percent for the U.S., meaning that nearly 40 percent of the employer costs were used to administer the system or account for the profit of insurance carriers. The loss ratios tend to vary substantially across different insurance carriers. For example, in 2005 the loss ratios for private carriers, state funds, and self-insured employers in the U.S. were 55.2 percent, 59.1 percent, and 84.2 percent, respectively (Sengupta et al., 2007).⁶ Private carriers tended to have the highest gap between benefits and costs, while self-insurers had the lowest gap.

For Hawaii, due to lack of data, only the loss ratio of private insurance carriers with active licenses with DCCA could be calculated. As mentioned before, the loss ratio for these carriers in Hawaii was only 30.7 percent in 2006, nearly half of that for the nation.⁷ During 1994-1998, Hawaii’s loss ratio for the private insurance carriers was close to that of the U.S. private carriers, but the gap increased since 1999. In 2005, the Hawaii’s private carrier loss ratio was only about 57 percent of that of U.S.⁸ The large and increasing gap between employer costs and employee benefits for the private insurance carriers (i.e., decline in the loss ratio) in Hawaii can be explained by three possible factors, namely increased administration costs of private insurance carriers, increased reserves retained by insurance carriers to pay for expected future claims, and increased profitability of insurance carriers.

Although we cannot identify the specific reasons for the increasing gap due to limited data, some observations can be made from the available information. First, according to the data from the Workers’ Compensation Center, Michigan State University (Welch, 2007), in terms of the profitability of WC insurance carriers, Hawaii ranked the 4th highest in the U.S. in 2005. The

⁶ In Hawaii, there is no WC state fund and state and county employees are included in the self-insured category.

⁷ It should be that if the direct losses incurred (the estimated costs based upon claims during the year) rather than the actual direct losses paid during the year were used to calculate the Hawaii loss ratios, the 2006 Hawaii loss ratio would be 39.2 percent, but this value is still significantly lower than the national average.

⁸ Comparison with the U.S. is for 2005, the latest year for which the national data were available when this report was prepared.

return on net worth of WC insurance carriers was estimated to be 16.7 percent for Hawaii, as compared to 9.6 percent for the U.S. These statistics suggest that higher profitability of insurance carriers is, perhaps, one of the reasons for a lower loss ratio in Hawaii.

Second, according to the data provided by DCCA, from 2000 to 2006, the total incurred losses (the estimated costs based upon claims) were about 22 percent higher than the total actually paid losses. In addition, the estimated incurred losses were higher than the actually paid losses in almost every year. With the number of WC claims decreasing over this period, higher estimated incurred losses than actually paid losses should mean increased reserves retained by insurance carriers to pay for expected future claims.

It is unlikely that a large gap between employer costs and employee benefits in Hawaii is due totally to the increased reserves retained by insurance carriers and high profitability. The administrative and legal costs may have also increased for various reasons. The lack of data, however, has prevented further analyses to estimate increases in administrative costs and identify specific reasons for it.

Every state in the U.S., except for Texas, mandates WC coverage for almost all private employees (U.S. DOL, 2005). Certain categories of workers, such as those in very small firms, certain agricultural workers, household workers, employees of charitable or religious organizations, or employees of some units of state and local governments are exempt from the mandatory coverage. Employers with fewer than three to five workers are also exempt in fourteen states. According to the NASI, all workers and wages covered by unemployment insurance (UI) in Hawaii are covered by the WC system, as compared to 97.3 percent in the U.S.

Once a worker reports an injury on work, the employer is required to file a WC-1 Form whether there is agreement that the injury is work related or not. To be compensated by the WC system, the injured workers must demonstrate that the injury is work related. It is possible that a reported WC case may incur no cost to the WC system. The injured worker may fully recover without using any WC benefit, or the case may be cancelled later if the injury was determined to be not work related.

If the employer denies the claim, the worker can file a WC-5 Form requesting the benefit. To determine whether the case should be covered by the WC system or not, the worker and the employer should provide their evidence and arguments in front of a WC Hearings Officer of DLIR.

Although the DCD does not differentiate whether a condition is a work-related injury or work-related illness, in practice, a work-related injury case is easier to verify than a work-related illness case. An injury is often caused by an accident. The employer can check the time and the place of the accident to determine whether it is work related or not. Unfortunately, it can often be difficult to determine whether an injury is indeed work-related. For example, a worker who injured his arm in a tennis game over the weekend could fall at work (by accident or on purpose) and report the condition as work-related. In this case, it would be very difficult for the employer to deny the WC coverage. This is a problem of the WC system with no simple solutions.

The determination of whether an illness is work-related illness can be even more complex. For example, a neck pain may be work related or due to other reasons (such as aging). Since illnesses can be developed over time, it is difficult for the employer to determine the nature (work related or non-work related) of the illness by simply checking the timing and place of the illness.

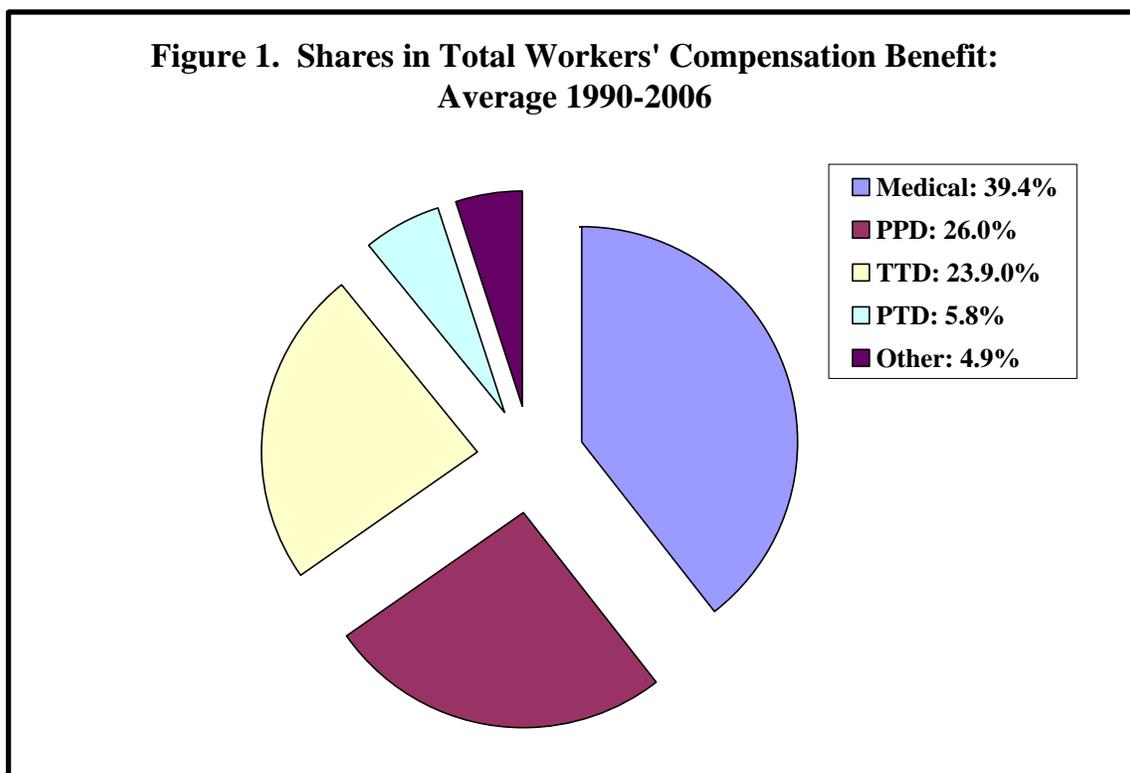
It should be noted that Hawaii has two state-mandated programs providing benefits to workers injured off-the-job, namely non-occupational temporary disability insurance (TDI) and the prepaid health care insurance (PHC). The employer-paid TDI program provides partial wage-loss benefits to employees who suffer off-the-job injuries or illnesses. Under the TDI program, if the carrier accepts the claim, the worker is entitled to 58 percent of his or her average weekly wage for up to 26 weeks. Under the PHC program, employers must provide covered employees with health care benefits for hospitalization, surgery, medicine, diagnostic tests, and maternity benefits (Ballantyne, 2006). In Hawaii, if the compensability of a work-related claim for the WC benefit is being disputed, the worker would get TDI and PHC benefits initially. If the claim is determined to be compensable under the WC law, the TDI and PHC carriers would have rights to recover TDI or PHC benefits covering the costs they incurred.

The WC system pays for medical care for work-related injuries immediately after the injury occurred and pays cash benefits for lost work hours after three to seven days of the injury. Most WC cases do not involve lost work hours longer than the waiting period of 3-7 days to receive cash benefits. In these cases, only medical benefits are paid. According to available information covering insured employers in 41 states in the U.S. for 1998-2002, the “medical only” cases accounted for 77 percent of total WC cases, but they accounted only for 6 percent of total benefits paid (Sengupta et al., 2007). Cash benefits differ according to the duration and

severity of the injury. As discussed before, the medical and cash benefits are only part of the total employer cost. These benefits are defined as compensation cost in this study.

Based on the statistics in Hawaii's "Workers' Compensation Data Book" prepared by the DLIR, the Hawaii WC program can be grouped into the following nine categories or sub-programs: (1) temporary total disability (TTD), (2) temporary partial disability (TPD), (3) permanent total disability (PTD), (4) permanent partial disability (PPD), (5) death, (6) disfigurement, (7) vocational rehabilitation, (8) attendant services, and (9) medical.

As shown in Figure 1, among these nine categories, medical benefits accounted for the largest share of total benefits in Hawaii (39.4 percent), followed by PPD, (26.0 percent), TTD (23.9 percent), and PTD (5.8 percent). These four benefit categories accounted for more than 95 percent of the total WC benefits in Hawaii during 1990-2006.



Medical Benefits

In 2006, the share of medical benefits in total WC benefits was 38.9 percent in Hawaii, almost the same as the average share during 1990-2006 (39.4 percent). For the U.S. total non-

federal workers, the share of medical benefits in total WC benefits was 48.8 percent in 2005, as compared to 39.3 percent for Hawaii for that year.

Under the Hawaii's current law, all medical and related expenses (including the parking fee) incurred in treating the injured workers under the coverage are paid by the insurer or self-insurer. The statute also allows insurers to write WC insurance policies allowing employer deductible for medical benefits. However, no data were available to determine how many of such policies exist in Hawaii.

The employee chooses the attending physician (the primary doctor of the injured worker) in Hawaii. The attending physician can be a medical doctor, a dentist, a chiropractor, an osteopath, a naturopath, a psychologist, an optometrist, and a podiatrist. The worker must select an attending physician from those practicing on the island where the injury occurred. If the services of a specialist are required, the employee can select any physician or surgeon practicing anywhere in the state. A worker can change the attending physician once but must notify the insurer or self-insurer. To make any subsequent change, the worker must obtain permission from the insurer or self-insurer. The DCD can order a change in an attending physician or a physical examination if a provider is chosen by the DCD (Ballantyne, 2006).

There are very detailed rules regarding the type and amount of medical services that can be used. For example, the current law allows for fifteen medical treatments and twenty visits to therapists per injury for the first sixty days. To continue treatment beyond that period, the attending physician must submit a treatment plan to the insurer or self-insurer at least 7 days prior to the next treatment. The insurer or self-insurer can object to the treatment plan at any time. However, the insurer or self-insurer must pay for treatments completed prior to the objection. Each treatment plan can last 120 days and for every 120 days of additional treatment, the attending physician must submit a new plan. The number of treatment is limited to fifteen within the 120-day period. If necessary, the attending physician can make referrals to other specialty health care providers (chiropractors, massage therapists, naturopaths, etc.) for treatment that the attending physician is unable to perform. The referrals are limited to a period of 60 days or a maximum of fifteen visits, whichever occurs first, and cannot be made to any persons or companies that the attending physician has a financial interest in them (DLIR, 2004). In addition, the current medical fee schedule established by Act 234 limits the reimbursement for medical services at 110 percent over the Medicare rate.

In case of medical bill disputes, the parties involved have 30 days to negotiate and resolve the disputes. Thereafter, any party may request a summary decision by the DCD's cost review branch. The insurer or self-insurer can deny treatment within the first 60 days or in the treatment plan. If the provider or employee disagrees, the party can request a hearing.

Permanent Partial Disability (PPD) Benefits

The second largest benefit category in Hawaii is the permanent partial disability (PPD) benefit, which accounted for 26.0 percent of total WC benefit from 1990 to 2006. In 2002 (the latest year for which the PPD benefit data were available for comparison), the share of PPD benefits in total WC benefits was 37.0 percent for the U.S., significantly higher than 24.3 percent for Hawaii in that year.

Once an injured worker attains the point of stability or maximum medical recovery possible, the worker may be sent to a physician to evaluate the extent of any permanent impairment. The evaluation is used to determine the extent of the disability, which in turn determines the amount to be paid to the employee for that disability. This is called a PPD award. PPD award is an indemnity benefit and is payable even if the worker returns to work.

States differ in their methods for determining whether a worker is entitled to PPD benefits, the degree of partial disability, and the amount of benefits to be paid (Barth and Niss, 1999; Burton, 2005). Cash benefits for PPD are frequently limited to a specified duration or a lump sum dollar amount. In Hawaii, except for medical benefit and vocational rehabilitation benefit, all other benefit categories are indemnity benefits. An indemnity benefit is calculated by multiplying a weekly benefit rate by the number of weeks allowed. The weekly benefit rate for PPD (both scheduled and unscheduled) is the state's maximum weekly benefit amount set at 100 percent of the state's average weekly wage (AWW) determined annually (on January 1) by the DLIR. In 2006, the maximum weekly benefit for PPD, TTD, TPD, and PTD was \$654. The number of weeks allowed is based on the impairment rating, subject to the maximum number of weeks allowed for the body part. Since the PPD award is directly related to the severity of the disability, the injured workers have incentive to exaggerate the extent of their disability.

Methods for compensating permanent impairments fall into several categories (Barth, 2004). Approximately 43 WC jurisdictions use a schedule – a list of body parts that are covered. Typically, a schedule appears in the underlying statute, which lists benefits to be paid (the

number of weeks allowed) for specific losses, for example, the loss of a finger. These losses invariably include the upper and lower extremities and may also include an eye. In most states, the schedules also include the loss of hearing in one or both ears. Injuries to the spine that are permanently disabling are typically not included, nor are injuries to internal organs, head injuries, and occupational diseases (Sengupta et al., 2007). In Hawaii, a schedule is included in Section 386-32, Hawaii Revised Statutes (HRS). The schedule includes upper and lower extremities, an eye, and the loss of hearing in one ear or both ears. The scheduled PPD benefit is calculated as the number of weeks allowed as specified by the schedule times the maximum weekly benefit amount. The PPD benefit is paid weekly at 66 2/3 percent of the workers AWW or the maximum weekly benefit amount whichever is lower until the total PPD benefit is paid. For example, a worker who lost a foot is entitled to 205 weeks of benefits. With the maximum weekly benefit amount at \$654 in 2006, the total PPD benefit will be \$134,070. The total benefit is independent of the worker's actual wage rate. If the worker's AWW is \$600 a week, the benefit is paid out at the rate of \$400 per week (66 2/3 percent of \$600) for 335.2 weeks (\$134,070 divided by \$400) (Ballantyne, 2006).

For conditions not listed on the schedule, four methods are used to determine the PPD benefits:

- An impairment-based approach is used in 19 states, including Hawaii. In 14 of those states, the worker with an unlisted PPD receives a benefit based entirely on the degree of impairment. Any future earnings losses of the worker are not considered. In Hawaii, unlisted PPD situations are rated as a percentage of the total loss or impairment of a physical or mental function of the whole person. The maximum compensation is computed on the basis of that impairment percentage of 312 weeks times the effective maximum weekly benefit rate. For example, if an injured worker is assigned 10 percent of PPD and the effective maximum weekly benefit rate is \$654, then the total PPD benefit will be \$20,404.8 (10% x 312 weeks x \$654/week = \$20,404.8). The statute currently mandates the use of the fifth edition of the American Medical Association's (AMA) *Guides to the Evaluation of Permanent Impairment* when rating permanent partial disability. In practice, PPD benefits are initially rated according to the AMA Guides, and then additional percentage points (typically from 1 to 7 points) are added, depending on the magnitude of the impairment rating. Initial PPD ratings are usually

provided by defense medical experts. Most workers' attorneys reported that they usually ask the treating physician if the initial rating is fair, rather than obtain another expert opinion. Relatively little litigation transpires over the amount of PPD benefits in Hawaii. The amount is usually resolved by a stipulated settlement agreement between the parties, which closes out future liability for indemnity benefits in the form of a lump-sum payment and leaves medical benefits open (Ballantyne, 2006).

- A loss-of-earning-capacity approach is used in 13 states. This approach links the benefit to worker's ability to earn or to compete in the labor market and involves a forecast of the economic impact that the impairment will have on the worker's total future earnings.
- In a wage-loss approach, which is used in 10 states, benefits are paid for the actual or ongoing losses that a worker incurs. In some states, the PPD benefit begins after maximum medical improvement has been achieved. In some cases PPD benefits can simply be the extension of temporary disability benefits until the disabled worker returns to work.
- In a bifurcated approach used in 9 states, the benefit for a PPD depends on the worker's employment status at the time that the worker's condition is assessed, after the condition has stabilized. If the worker has returned to work with earnings at or near the pre-injury level, the benefit is based on the degree of impairment. If the worker has either not returned to work or has returned but offered lower wages than before the injury, the benefit is based on the degree of lost earnings (Sengupta et al., 2007).

Due to the complexity of the methodologies used by each state to determine PPD benefits, comparison of benefit levels is difficult. Based on a report published by the Council of State Governments (Melissa and Khodeli, 2004), among the 33 states with PPD benefit duration limits in 2003, only 8 states had a benefit duration limit lower than Hawaii's benefit duration limit of 312 weeks. The benefit duration limit varies from a low of 200 weeks in Ohio to a high of 1,500 weeks in North Dakota. Among the 50 states that had maximum weekly PPD benefits in 2003, 31 states had lower maximum weekly benefits than Hawaii's maximum weekly benefit of \$580. The maximum weekly benefit varied from a low of \$150 in Puerto Rico to a high of \$1,018 in New Hampshire.

Temporary Total Disability (TTD) Benefit

The third largest benefit category in Hawaii is the temporary total disability (TTD) benefit, accounting for about 23.9 percent of total Hawaii WC benefits between 1990 and 2006. The U.S. total temporary disability benefits (including TTD and TPD) accounted for only about 11 percent of total WC benefits in 2002, compared to the Hawaii's share of about 25 percent in the same year. Thus, based on the available data, the share of TTD in total benefits was significantly higher in Hawaii than in the U.S.

Because of lack of data, it was not possible to identify the specific reasons why the share of TTD benefit in Hawaii was significantly higher than the national average. The difference may simply be due to accounting definitions. According to the DLIR, the reason for the higher Hawaii's TTD share could be that part of benefits paid during participation in vocational rehabilitation (VR) program may have been reported under TTD in Hawaii, while the VR benefits may have been reported as separate VR costs in other states rather than including them under TTD (DLIR, 2008). If the VR benefits were added to TDD, perhaps the difference would be much smaller. The difference in duration of rehabilitation plan could also be a factor.

TTD payments are made to injured workers if they are unable to work due to injuries that are not permanent in nature. TTD payments are temporary wage replacement benefits for the injured workers until they are able to return to work. Most states pay weekly benefits for TTD that replace two-thirds of the worker's pre-injury wages, subject to a maximum amount that varies from state to state. In Hawaii, no compensation for TTD is payable for the first three calendar days of disability. TTD payment is calculated as 66 2/3 percent of the injured workers' average weekly wage but no more than the maximum weekly benefit amount annually set by the DCD. In 2006, this maximum weekly benefit amount was \$654. Workers with weekly wage higher than \$981 in 2006 would be paid less than 66 2/3 percent of their average weekly wages. For the TTD, TPD, and PTD benefit, the benefit rate is also subject to a minimum weekly amount set at 25 percent of average weekly wage for the state. In 2006, the minimum weekly amount for TTD, TPD, and PTD was \$164.

Based on a study conducted by the Council of State Governments in 2004 (Melissa and Khodeli, 2004) the maximum weekly benefit amount of TTD varied from a low of \$200 in Puerto Rico to a high of \$1,103 in Iowa in 2003. In 2003, the Hawaii maximum weekly benefit amount of TTD was \$580, with 25 states with higher maximum weekly benefit amount than

Hawaii's. Most of the states, including Hawaii, have no benefit duration limit. For the 17 states with a benefit duration limit, the limit varies from a low of 104 weeks to a high of 500 weeks, with an average of 321 weeks.

Since paid sick leave, temporary disability benefits, and long-term disability insurance for non-work-related injuries or diseases are also available to some workers, the injured workers may choose between receiving TTD payment and using sick leave or the combination of the two.

Permanent Total Disability (PTD) Benefit

The fourth major benefit category in Hawaii is the permanent total disability (PTD) benefit, accounting for 5.8 percent of total WC benefits during 1990-2006. In 2002, PTD and death benefits together accounted for 5.9 percent of total WC benefits in the U.S., compared with 7.7 percent for Hawaii in that year. The higher PTD share in Hawaii may be partially due to benefit adjustment for inflation every 10 years pursuant to HRS 386-35 passed in 1980.

If an employee is permanently injured on the job and unable to perform any kind of work after the injury, the employer provides the injured worker with a PTD benefit. PTD benefit payments are calculated the same way as TTD payments, which are equal to $66 \frac{2}{3}$ percent of the worker's average weekly wage, but no more than the maximum weekly benefit amount. The eligibility for PTD benefits is determined at a hearing held by the DCD. A PTD claim does not only affect the WC cost of the current year, but also the WC cost in future years. To compare the PTD benefit level across states, one can look at the maximum weekly benefit and benefit duration limit. The maximum weekly benefits for PTD in all states are the same as the maximum weekly benefits for TTD. As mentioned before, in 2003, about half of the states (25 states) had higher maximum weekly benefit amount than Hawaii. Most of the states, including Hawaii, set the benefit duration limit as the duration of disability.

Other WC Costs

In addition to the four major WC categories described above, there are five other categories, which together accounted for less than 5 percent of total WC cost in Hawaii. These categories are briefly discussed below.

Vocational rehabilitation accounted for 2.3 percent of total WC cost in Hawaii during 1990-2006. If a worker has suffered permanent disability, but can be vocationally rehabilitated,

the worker is eligible for vocational rehabilitation services to be paid by the employer. The injured worker can select his or her own certified service provider. The employer or its insurance carrier may challenge the worker's right to vocational rehabilitation services. The injured worker is also entitled to collect TTD payments from the employer during vocational rehabilitation.

During 1990-2006, temporary partial disability (TPD) cost accounted for 1.0 percent of total WC cost in Hawaii. TPD payments are made to workers who have an injury that causes partial disability that is not permanent but diminishes the worker's ability to work. The employer must pay weekly TPD payments at the weekly benefit rate of $66 \frac{2}{3}$ percent of the difference between the worker's weekly wages before and after the injury.

Death benefits are weekly benefits paid to the surviving spouse and dependent children (including full-time students up to 21 years of age). Funeral expenses up to 10 times and burial expenses up to 5 times the maximum weekly benefit rate are also allowed for one time. Death benefits accounted for 0.9 percent of total WC cost in Hawaii during 1990-2006.

Disfigurement indemnity is similar to a PPD award by nature. Disfigurement indemnity accounted for only 0.6 percent of total WC cost in Hawaii from 1990 to 2006. If an injury results in a permanent disfigurement, such as scars, deformity, and discoloration, the injured worker may be entitled to an additional compensation. Disfigurement awards are statutorily capped at \$30,000 and are separate from PPD.

Attendant services accounted for only 0.1 percent of total WC cost in Hawaii from 1990 to 2006. This is the cost of services of an attendant for a totally disabled employee.

3. HISTORICAL PERFORMANCE

In this section, historical performance of the Hawaii's WC system is assessed to answer the following fundamental questions:

- Has the WC employer cost increased faster in Hawaii than in the U.S.?
- Are there areas where WC costs to employers can be significantly reduced in Hawaii?

To address these questions, comparisons between Hawaii and national average are conducted. First, the gap between employer cost and employee benefits is examined, followed by a comparison of the benefit levels and premium rate ranking. Finally, recent trends in Hawaii WC benefits are also analyzed.

3.1. Data and Measurement

To assess the historical performance of the Hawaii WC system and conduct comparisons between Hawaii and other states in the U.S., the following data sources were used: (1) the "Workers' Compensation Data Book" prepared by the DLIR (DLIR Data, various years), (2) the Report of the Insurance Commissioner of Hawaii from Hawaii Department of Commerce and Consumer Affairs (DCCA Data, various years), (3) data from the National Academy of Social Insurance (NASI Data, 2005), (4) the WC Premium Rate Ranking from the Oregon Department of Consumer & Business Services (Oregon Data), and (5) data from the Workers Compensation Research Institute (Ballantyne, 2006).

The DLIR Data include detailed information on annual WC cost paid by insurance carriers, self-insured employers (including the state and county governments), and the WC Special Compensation Fund (SCF). These cost data reflect benefits received by the injured workers during the calendar year. The DLIR Data, however, include no information on total employer costs. In 2006, DLIR reported \$242.7 million of total WC costs.

The DCCA Data include both employer cost and employee benefits, but information is limited to the private insurance carriers with active licenses with DCCA. Self-insured employers and SCF are not included in the DCCA Data. In its annual reports, the DCCA provides two types of data on employee benefits, namely "direct losses paid" and "direct losses incurred". The incurred cost is an estimate of total cost for the duration of the claim, which may be over several years. The paid losses are the actual benefit paid during the year. In 2006, the total losses paid and the total losses incurred were reported to be \$109.3 million and \$139.6 million,

respectively. This study focuses on the losses paid rather than the losses incurred. The losses paid reported by DCCA accounted for about 45 percent of total WC cost (\$242.7 million) reported by DLIR in 2006.

The NASI Data include both employer cost and employee benefits at the national level only. The Oregon Data include WC premium rates by state but the rates are estimated based on employment patterns in Oregon.

The gap between employer costs and employee benefits between Hawaii and the U.S. is compared in terms of the loss ratio (i.e., the ratio of total employer cost over total employee benefits). To compare the benefit level, both benefits per individual covered worker and the benefits per \$100 of covered wages are used. To examine the historical trends of WC benefits and performance, the following data series are used: (1) total WC benefits, (2) total number of reported WC cases, (3) total processed cases with cost, (4) the WC work days lost, and (5) the benefit level and case volume by category. Total wage and salary (W&S) data from the DLIR and the Bureau of Economic Analysis (BEA) are also used to compare the relative share of WC benefits in total W&S income.

The WC total benefit is the best available measure of direct monetary cost of WC claims. Total WC benefits include indemnity benefits, wage loss benefits, and other expenses, such as medical and vocational rehabilitation expenses. Indemnity benefits may be paid directly to the injured worker in lump sum or in semi-monthly payments.⁹ The lump-sum payments would affect the WC cost for a particular year, while semi-monthly payments would affect the cost for several years. The compensation for wage loss is paid periodically and it may affect the WC cost for more than a year. Other expenses not directly paid to the workers may also last more than one year. It should also be noted that the total cost of the WC program is not limited to the reported WC cost. For example, the wages paid to the WC system administrators are not included as part of the WC cost.

The best way to reduce the costs of the WC system is to reduce the number of work related injuries and illnesses. Any measure that leads to reduced accidents will tend to benefit both the workers and the employers. Therefore, it should be very useful to examine the number of injuries and illnesses over time. The number of claims provided by DLIR is probably the best

⁹ Lump sum is paid in settlements if the scheduled benefits terminate prior to the decision date. If the scheduled benefits are payable until after the decision date, semi-monthly payments may be made to the injured worker for PPD benefits. The PTD benefits are also paid semi-monthly until the injured worker dies.

estimate of the number of work related injuries and illnesses. It should, however, be noted that a WC case can be reported within two years of the injury, so the number of annual reported WC cases may not exactly match the annual number of injuries.

Total WC benefits are affected by several factors, including the number and duration of injuries and the benefit level of the WC programs involved. Since, in some cases, it may take more than one year to recover from an injury, the annual total processed cases with cost can be higher than the annual reported cases. By dividing the total processed cases by total WC benefits, the average benefit per processed case can be calculated. However, the changes in average benefits should be interpreted with caution, because changes in average benefits may be affected by factors other than increased benefit levels. Changes in the mix of injury types can also cause changes in average benefit paid without an increase in benefit level. For this reason, it is preferable to examine the changes in average benefits by program type. Examining the average benefit under each major WC category will highlight the areas with large potentials to reduce costs. It is also useful to examine the WC work days lost to impute the value of the social cost of the work related injuries from another angle.

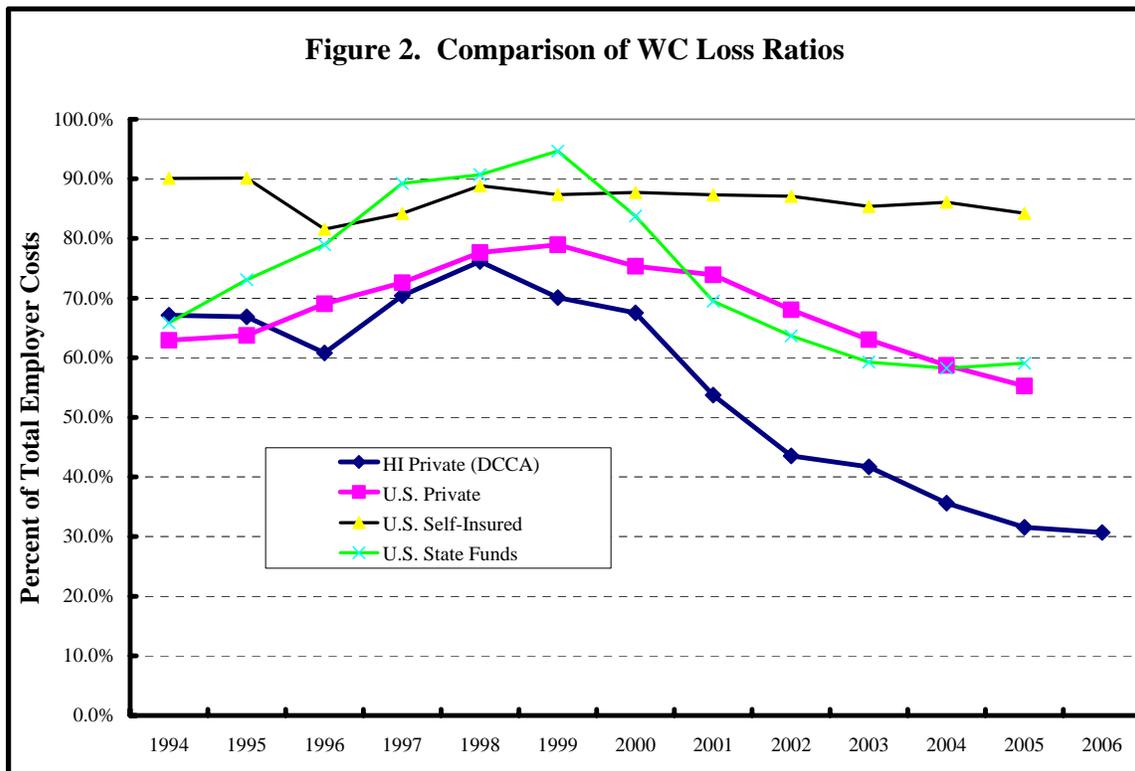
The WC benefit data found in the WC Data Book only provide an estimate of direct monetary payments for WC claims, excluding claim management expenses, insurer's expenses and their profit margins, and other WC regulatory costs. To estimate the total cost paid by the employers, the "Oregon Workers' Compensation Premium Rate Ranking" study is examined.

3.2. The Gap between Employer Cost and Employee Benefit

The gap between employer cost and employee benefit is measured in terms of the loss ratio. As shown in Figure 2, Hawaii's loss ratio for the private carriers was close to the loss ratio of U.S. private carriers from 1994 to 1998. Since 1999, however, the difference between Hawaii and U.S. private carrier loss ratios has increased considerably. In 2005, the loss ratio for Hawaii's private carriers was only about 57 percent of that for the U.S. private carriers. In 2005, for the U.S. private carriers, of every dollar spent by the employers, 55 cents were received by the employees as benefits. The corresponding figure for Hawaii private carriers was only about 32 cents. As discussed earlier, the lower loss ratio in Hawaii seem to indicate that the Hawaii WC private insurance carriers were either less cost-effective in their management (with high administrative expense including attorney fees) or more profitable or both.

Not only is the loss ratio in Hawaii lower than the national average, but it has also decreased sharply since 1998. For example, the loss ratio in Hawaii decreased from 76.2 percent in 1998 to 30.7 percent in 2006. Although the loss ratio for the U.S. private carriers also decreased over time, it did not decrease as fast as that of Hawaii. It appears that one of the potential areas to reduce the WC employer cost in Hawaii is improving the loss ratio. More detailed studies are needed to determine the reasons for the low and decreasing loss ratio in Hawaii. Some likely reasons may include lack of competition among WC insurance carriers, stickiness of premium rates, intensive involvement of attorneys, and low efficiency in management.

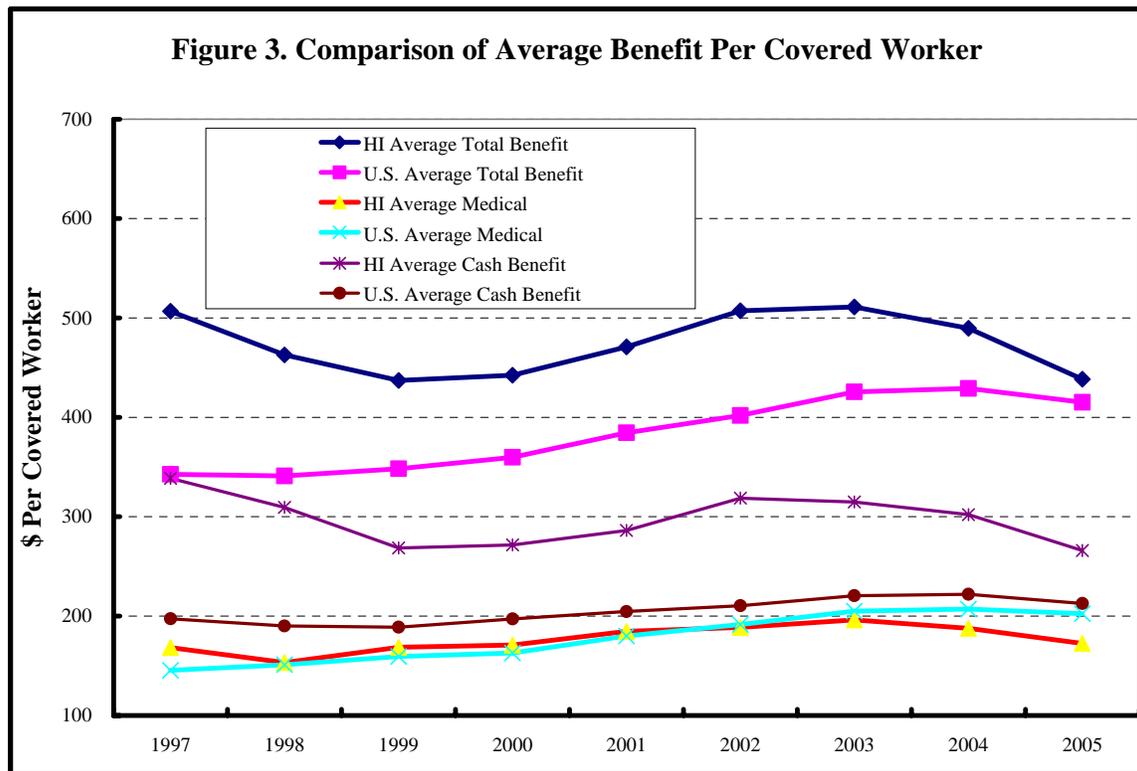
Based on the available data, the U.S. loss ratio for self-insured employers was much higher than that of the private carriers (Figure 2). For example, in 2005, the loss ratio for self-insured employers was 84.2 percent, as compared to 55.2 percent for the private carriers. In addition, the loss ratio of self-insured has been more stable over time.



3.3. Comparison of Benefit Levels

The WC employer cost is affected directly by the WC benefit level. To compare the WC benefit levels between Hawaii and the U.S., both the average benefit per covered worker and the average benefit per \$100 of covered wages were calculated. To calculate the average benefits for the U.S., the non-federal total was used, as federal employees are covered by a separate program. In addition to average total benefits, the average medical and cash benefits were also compared. The average medical benefits are the medical expenses that do not directly relate to the wage levels, while average cash benefits depend on wages.

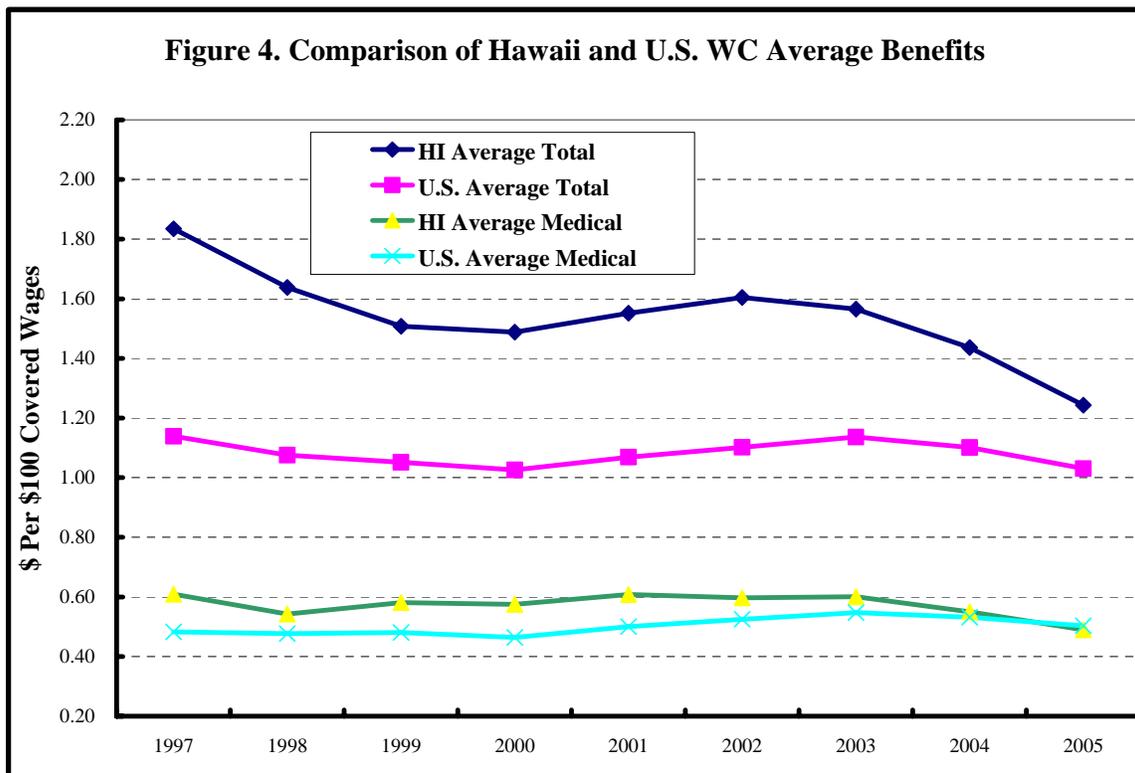
As shown in Figure 3, the average WC benefit per covered worker in Hawaii continued to be higher than that of the U.S. as a whole, but the difference seemed to have decreased over time. In 1997, the average WC benefit per covered worker was \$507 in Hawaii, about 48 percent higher than that for the U.S. In 2005, Hawaii's average decreased to \$438, only about 6 percent higher than the U.S. average.



From 1997 to 2005, the average annual medical benefit per covered worker in Hawaii remained at about the same level of about \$170 per year, while that for the U.S. increased from

\$145 to \$202 in the same period. In 1997, the average medical benefit in Hawaii was 16 percent higher than that for the U.S, but in 2005 it was 15 percent lower.

Figure 4 compares the Hawaii and national WC average benefits per \$100 covered wages from 1997 to 2005. The difference in average benefit based on per \$100 covered wages was larger than that based on a per covered worker basis. In 1997, the average WC benefit per \$100 covered wages in Hawaii was \$1.83, about 61 percent higher than that of the U.S. average. In 2005, it decreased to \$1.24, but still 21 percent higher than that of the U.S.



The difference in average benefits per \$100 of wages between Hawaii and the U.S, as a whole is mainly due to the difference in cash benefit. In 2005, the average medical benefit per \$100 of covered wages in Hawaii was below the national average. Hawaii’s relatively higher average cash benefit per \$100 of wages was partly due to its relatively lower average wage. In 2005, average annual wage of covered workers was \$35,262 for Hawaii, about 12 percent below the U.S. average. As mentioned before, the cash benefits in most states are subject to a maximum weekly limit. Workers with higher wages are more likely to hit the maximum benefit limits and receive a lower benefit per \$100 of wages.

Thus, the data indicate that the average WC benefit in Hawaii is higher than the national average, especially in terms of the average benefit per \$100 of covered wages, although the difference has decreased over time. The higher overall benefit level in Hawaii is mainly due to higher cash benefit.

3.4. National Premium Rate Ranking

Since the WC insurance premium rate is calculated based on \$100 of covered wages, the relatively high benefit level in Hawaii has contributed to its high premium rate. According to the WC premium rates estimated by the Oregon Department of Consumer & Business Services (Oregon Study), Hawaii ranked the 15th in the nation in 2006 (Oregon DCBS, 2007). The index rate was \$2.89 for Hawaii, about 16 percent higher than the median index rate. Although Hawaii's rank was still high in 2006, it has decreased over time. In 2002, with the index rate of \$3.48 Hawaii had the third highest premium rate in the U.S.

The large gap between employer cost and employee benefit may also have contributed to the relatively high premium rate in Hawaii. In the Oregon Study, the gaps between employer cost and employee benefit were measured in terms of the expense load factors.¹⁰ In 2006, Hawaii was estimated to have a load factor of 61.1 percent. Among the 32 states included in the recent Oregon Study, only six states had a higher load factor than Hawaii in 2006. In 2004, Hawaii had a load factor of 65.3 percent and only five states (among the 32 states) had higher load factors than Hawaii in that year. Higher load factors mean larger gaps between employer costs and employee benefits.

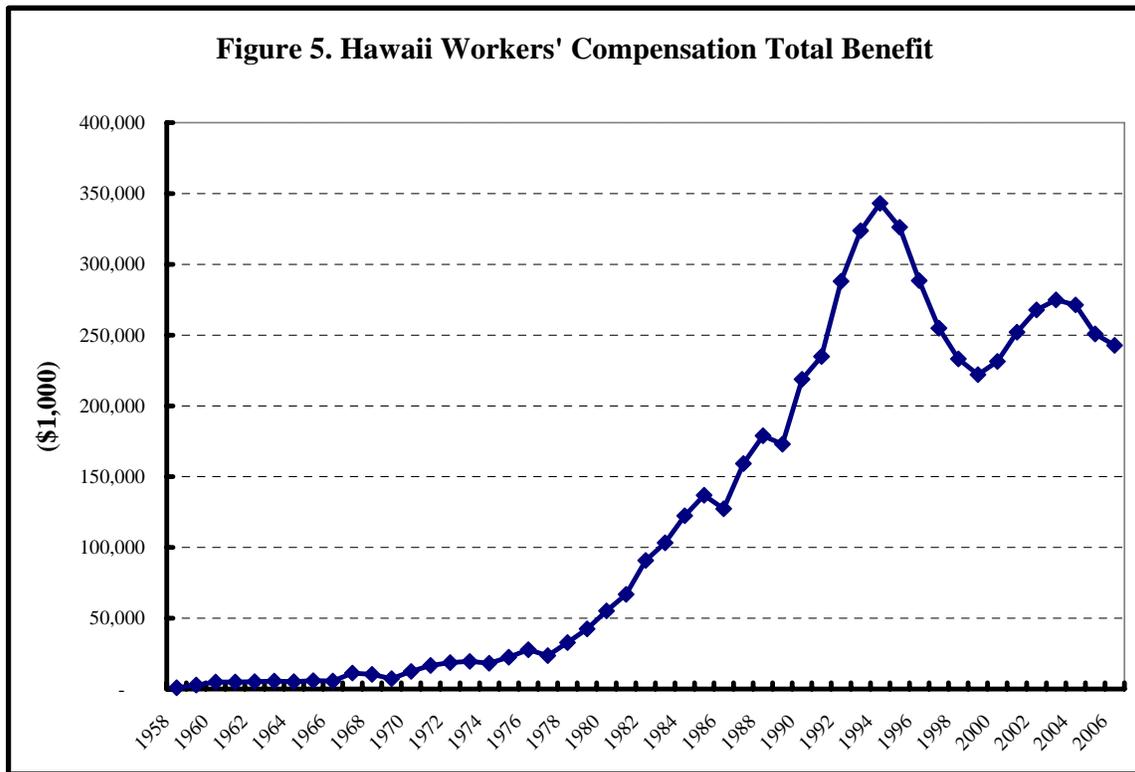
3.5 Historical Trends of Workers' Compensation Benefits

This sub-section examines the historical trends of WC benefits in Hawaii. The total growth in WC benefits is decomposed to its natural and additional growth components.

¹⁰ Expense load factors are the factors by which pure premium rates are multiplied to account for the insurer's expense, taxes, and profit to create an annual rate. Pure premium is the amount of premium necessary to pay for workers' compensation claims, excluding all loss adjustment or claim management expenses, other operating expenses, assessments, taxes, and profit allowance for the insurance carriers.

Growth of Total WC Benefits in Hawaii

As shown in Figure 5, total WC benefits in Hawaii increased rapidly from 1977 to 1994. Reversing the upward trend until 1994, total WC benefits decreased significantly during 1995-1999. It appears that the enactment of Act 234 in 1995 and Act 261 in 1996 may have contributed significantly to controlling the growth of WC benefits. Total benefits increased slightly during 2000-2003 but decreased again during 2004-2006. The decreases from 2004 to 2006 may be attributed to numerous internal changes introduced by DLIR to improve the WC system, including the streamlining the WC hearing process, improving the skills of DLIR hearing officers through training, implementing a review process to ensure the decisions made by the hearing officers are fair and consistent, and initiating fundamental changes to the Hawaii Occupational Safety and Health (HIOSH) Branch of DLIR to improve the cooperation between HIOSH and business communities in injury prevention.



Natural Growth and Additional Growth

In the WC literature, total benefit growth is decomposed to its natural and additional growth components. Natural growth is due to employment growth (meaning more claims), wage

growth (higher benefits per claim), and inflation (higher medical costs). The difference between total growth and natural growth is called additional growth. If overall benefit growth is mainly due to natural growth, then the growth is not from operational problems in the system. However, low additional growth does not necessarily imply that the system has no operational problems, because the benefit level may be too high to start with. On the other hand, high additional growth also does not necessarily imply that the system has more problems, because the initial benefit level may be too low.

To estimate the additional growth, the growth rates of WC benefits and nominal wage and salary (W&S) income were compared. Changes in nominal W&S income can result from changes in total W&S jobs, changes in average wage rate, and inflation. From 1965 to 2006, the total WC benefit in Hawaii increased 9.5 percent per year on average, about 1.8 percentage points higher than the annual growth rate of total nominal W&S income (excluding federal government). Most of this additional growth, however, occurred before 1995. From 1965 to 1994, the WC benefits increased 15.0 percent per year, while W&S income increased 9.2 percent per year. From 1994 to 2006, WC benefits decreased 2.8 percent per year, while W&S income increased 4.0 percent per year.

3.6. Historical Trends in Workers' Compensation Cases and Average Benefit per Processed Case

Reported WC Cases

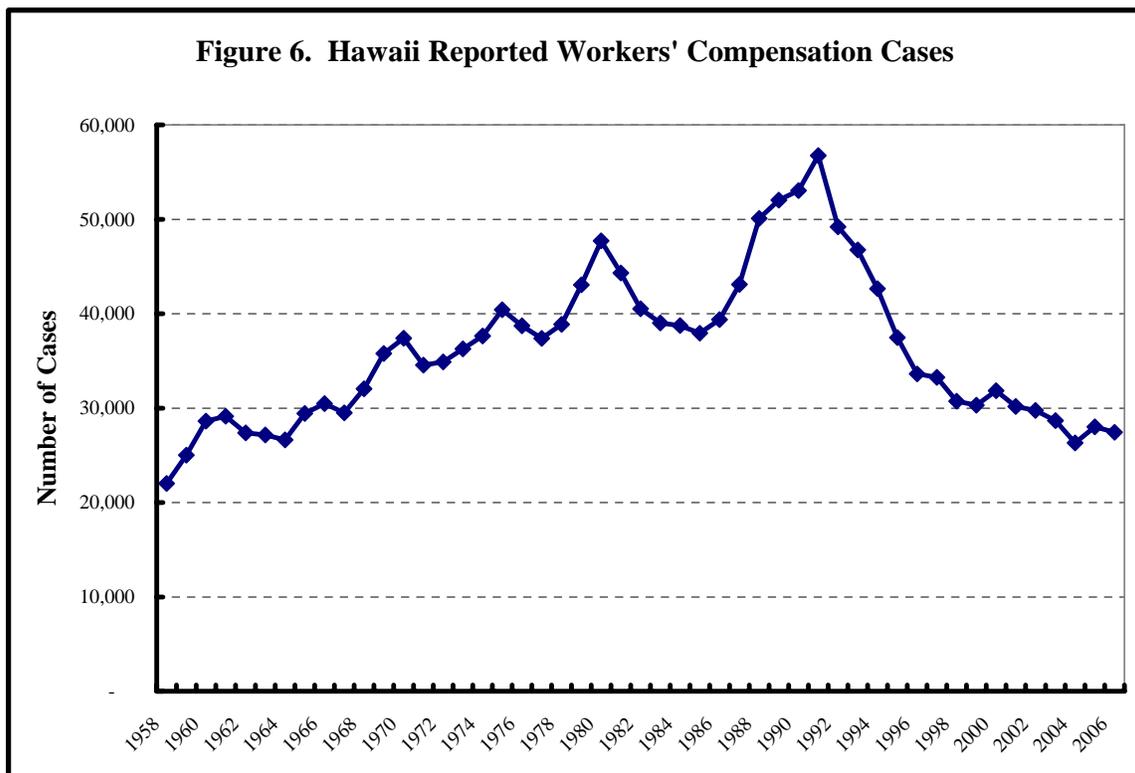
Preventing work related injury in the first place is probably the best way to control WC costs. Since the annual injury data are not available, the reported WC cases are used as a proxy for the number of injuries occurred. As shown in Figure 6, the number of reported WC cases in Hawaii increased in the 1960s, 1970s, and 1980s, before reaching a peak in 1991. Since 1992, the number of reported cases decreased every year, with the number of reported WC cases in 2006 being about the same level as that in the early 1960s.

In Hawaii, Acts 224 and 261 have been attributed to successfully promoting safety and health in Hawaii's workplace.¹¹ Act 234 (1995) offered WC premium discounts for employers that implemented a certified and effective safety and health plan. Act 261 (1996) established the

¹¹ For example, in the "Testimony to the Legislature for Workers' Compensation Reform" submitted by DLIR in February 6, 2004.

Hawaii Employer's Mutual Insurance Company (HEMIC) to vigorously promote and provide a high standard of workplace safety to those companies getting WC coverage from it.

Theoretically, Acts 224 and 261 may have contributed to reducing the number of workplace injuries in Hawaii. However, it is difficult to quantify the actual impacts due to these acts. As shown in Figure 6, the total WC cases reported indeed decreased from 1995 to 2006, but this downward trend had already started in 1992, before the enactment of the two acts. Between 1991 and 2006, total reported cases decreased about 52 percent, but 34 percent of this decrease occurred between 1991 and 1995. It appears that the decreases in total reported WC cases since 1992 are due to great efforts of Hawaii's employers in providing a safer workplace for their workers.

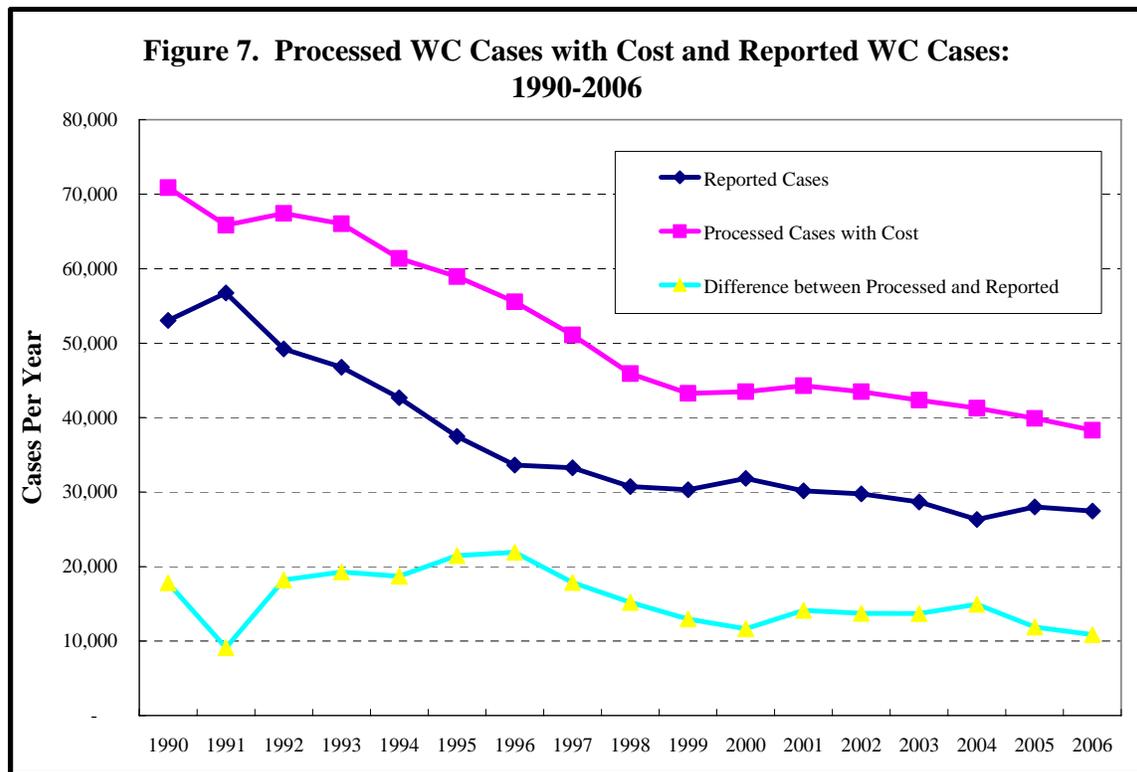


Duration of the WC Cases and Average Benefit per Processed Case

Total WC benefits are also affected by the duration of the injuries. Due to lack of data, it is not possible to directly measure the average duration of the WC cases. In this study, the gap between processed WC cases with cost and reported cases is used as a proxy to measure the changes in average duration of the WC cases. The processed WC cases with cost in a particular

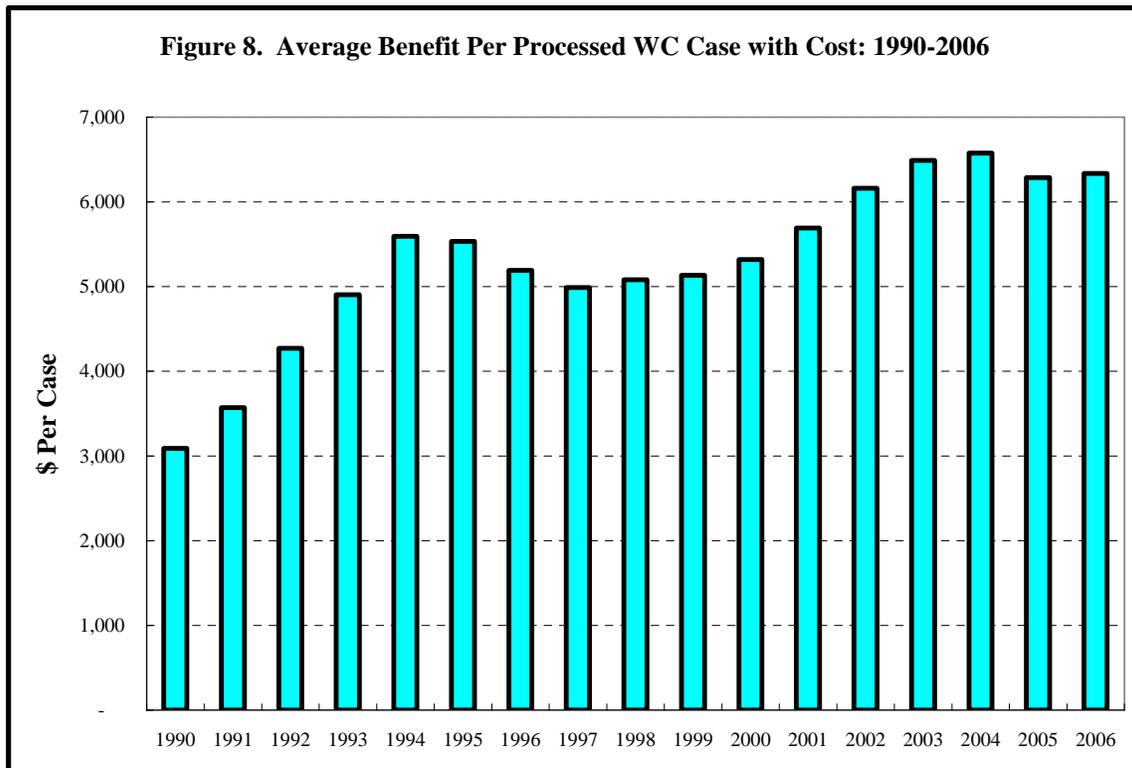
year may also include some of the reported cases from the previous years (cases lasting more than one year). If the number of cases lasting more than one year increased, other things being equal, the average duration would also increase. This measure, however, may not be an accurate measure for the duration of WC cases.

As shown in Figure 7, the gap between processed and reported cases was relatively high in the first half of the 1990s, but the gap narrowed gradually in the second half of the 1990s. The decrease in the gap between reported and processed cases is an indication of reduction of the average duration of a claim. The gap was about 18,000 cases during 1992-1997, decreasing to about 12,000 by 2000. Between 2000 and 2006, the gap was quite stable.



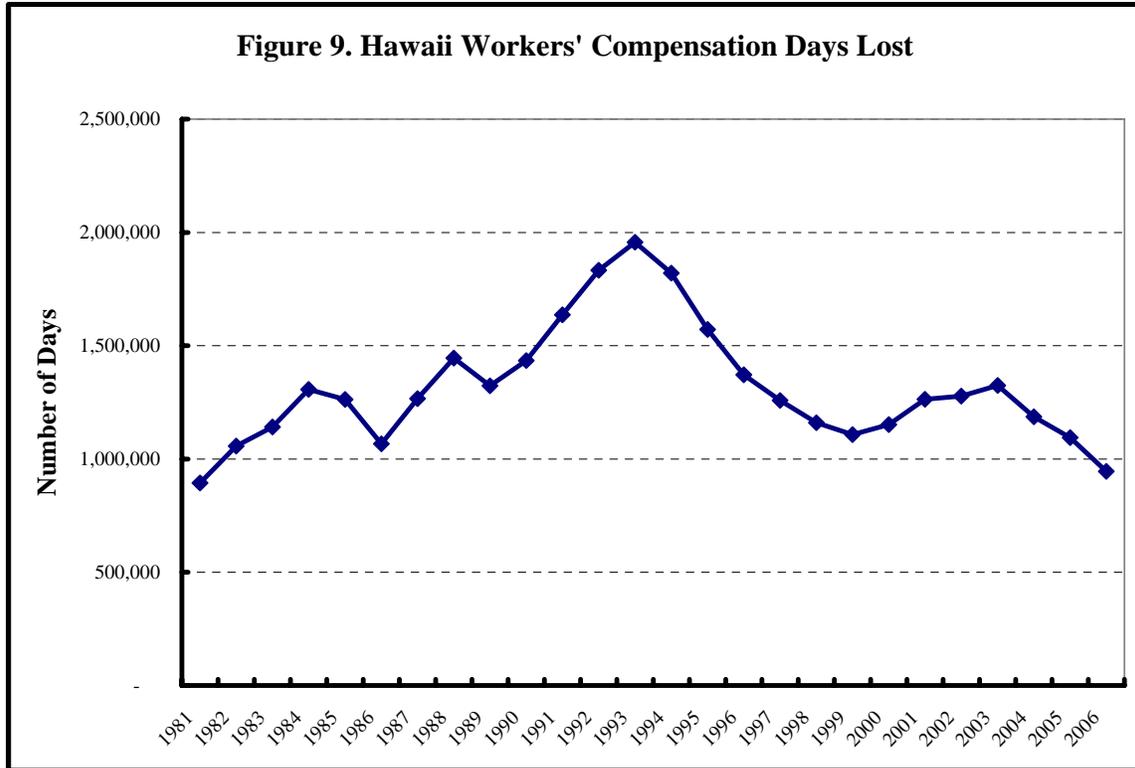
From 1990 to 2006, although Hawaii total reported and total processed WC cases with cost decreased at average annual rates of 4.0 percent and 3.8 percent, respectively, total WC benefit still increased 0.6 percent annually at the same period, due to increased average benefit per processed case with cost. As shown in Figure 8, the average benefit per processed case with cost increased rapidly from 1990 to 1994 and then decreased gradually during 1995-1997. It increased again during 1998-2004, but at a slower pace compared to that in the early 1990s. The

average benefit per processed case with cost decreased in 2005 but increased slightly in 2006. From 1990 to 2006, the average benefit per processed case grew 4.6 percent per annum. During the same period, Honolulu’s CPI-U for all items increased 2.6 percent per year and Honolulu’s CPI-U for medical service increased 4.3 percent per year.



3.7. Historical Trends of Workers’ Compensation Lost Work Days

Lost work days or the number of days compensated is a measure of social cost of the WC system. It should be noted that an injured worker may choose to use his or her unused sick leave and not to be compensated by the WC system. Therefore, the total lost work days due to work related injury may be higher than the reported WC lost days. As shown in Figure 9, Hawaii WC lost work days had an upward trend in the 1980s and early 1990s until reaching a peak of almost 2 million days in 1993. Since then WC lost work days decreased steadily, reaching about 1.1 million days in 1999. It increased about 216,000 days per year from 1999 to 2003 but decreased since 2003. In 2006, it decreased to less than 950,000 days, the lowest level since 1982.



3.8. Historical Growth of Workers' Compensation Benefit by Category

From 1990 to 2006, Hawaii total WC benefit increased 0.6 percent per year on average. As shown in Table 1, the top three benefit categories that accounted for about 90 percent of total WC benefit increased at a relatively slow rate or remained flat. During that period, medical and permanent partial disability (PPD) benefits increased at annual rates of 0.7 percent and 0.3 percent, respectively, while temporary total disability (TTD) benefit was flat.

The slow growth in these major benefit categories was due to decreases in the number of respective processed cases with cost. As shown in Table 2, from 1990 to 2006, the numbers of medical, PPD, and TTD cases decreased at average annual rates of 3.8 percent, 1.5 percent, and 3.5 percent, respectively.

Table 1. Hawaii Workers' Compensation Cost by Category: 1990-2006

	Temporary Total Disability TTD Cost (\$M)	Temporary Partial Disability TPD Cost (\$M)	Permanent Total Disability PTD Cost (\$M)	Permanent Partial Disability PPD Cost (\$M)	Death Benefit Cost (\$M)	Disfigurement Cost (\$M)	Vocational Rehabilitation Cost (\$M)	Attendant Services Cost (\$M)	Medical Services Cost (\$M)	Total Cost (\$M)
1990	55.1	1.5	8.7	61.2	2.8	1.9	3.7	0.3	83.6	218.8
1991	64.2	1.7	7.8	56.8	2.3	1.6	5.4	0.2	94.9	235.0
1992	75.1	2.3	13.6	69.5	2.8	1.8	6.6	0.3	116.0	288.0
1993	83.4	2.8	11.2	76.3	2.4	1.9	7.9	0.2	137.7	323.8
1994	80.3	3.1	19.8	81.9	2.6	1.7	7.9	0.4	145.5	343.1
1995	70.9	2.8	15.5	95.1	2.8	1.8	7.9	0.3	129.1	326.1
1996	61.1	2.8	17.6	93.6	2.8	1.9	6.6	0.4	101.7	288.5
1997	57.4	2.8	16.7	72.5	2.9	1.8	6.2	0.2	94.4	254.9
1998	53.4	2.9	15.7	64.9	2.2	1.4	5.5	0.2	87.0	233.2
1999	51.6	2.7	15.8	57.1	2.4	1.3	5.4	0.2	85.5	222.1
2000	55.3	2.7	15.5	57.3	2.0	1.3	5.6	0.5	91.2	231.4
2001	62.6	3.0	15.1	57.9	2.7	1.4	5.8	0.2	103.3	252.0
2002	65.1	2.9	18.4	65.2	2.4	1.6	6.3	0.1	105.9	267.8
2003	67.7	3.2	17.6	68.8	2.3	1.6	6.4	0.3	106.9	274.9
2004	63.7	3.2	18.1	69.5	2.1	1.5	6.1	0.2	106.8	271.3
2005	59.1	3.1	16.0	66.4	2.0	1.3	5.1	0.2	97.6	250.8
2006	55.0	2.6	18.6	64.2	2.2	1.5	4.9	0.4	93.4	242.7
Annual Growth	0.0%	3.6%	4.9%	0.3%	-1.6%	-1.5%	1.7%	2.1%	0.7%	0.6%

Table 2. Hawaii Workers' Compensation Cases by Category: 1990-2006

	Temporary Total Disability TTD Cases	Temporary Partial Disability TPD Cases	Permanent Total Disability PTD Cases	Permanent Partial Disability PPD Cases	Death Benefit Cases	Disfigurement Cases	Vocational Rehabilitation Cases	Attendant Services Cases	Medical Services Cases	Total Cases
1990	23,002	1,142	946	4,998	243	4,705	1,697	55	65,177	101,965
1991	23,035	1,234	1,349	4,405	200	3,663	2,246	18	60,741	96,891
1992	23,401	1,538	1,503	5,170	206	4,015	2,585	19	62,241	100,678
1993	23,084	1,794	1,164	5,395	188	3,807	2,739	15	61,434	99,620
1994	21,406	1,792	1,628	5,602	195	3,331	2,496	23	57,221	93,694
1995	19,540	1,871	834	6,434	168	3,542	2,393	18	54,526	89,326
1996	17,844	1,874	878	6,402	189	3,734	1,936	16	50,851	83,724
1997	16,704	1,948	872	5,153	186	3,206	1,686	18	47,034	76,807
1998	15,349	1,955	845	4,493	156	2,765	1,531	14	42,482	69,590
1999	14,694	1,786	828	3,950	154	2,693	1,365	12	40,062	65,544
2000	14,937	1,732	817	3,845	137	2,598	1,285	12	40,163	65,526
2001	14,910	1,698	805	3,904	137	2,658	1,371	10	41,237	66,730
2002	15,246	1,688	794	4,297	128	3,036	1,459	10	40,339	66,997
2003	14,821	1,752	776	4,310	133	3,136	1,430	12	39,043	65,413
2004	14,085	1,870	759	4,355	125	3,045	1,383	10	38,084	63,716
2005	13,639	1,712	655	4,081	112	2,688	1,232	11	36,928	61,058
2006	13,025	1,539	715	3,930	124	2,799	1,067	13	35,199	58,411
Annual Growth	-3.5%	1.9%	-1.7%	-1.5%	-4.1%	-3.2%	-2.9%	-8.6%	-3.8%	-3.4%

The average benefit per case, on the other hand, increased over time for each of the major categories. As shown in Table 3, from 1990 to 2006, the average benefit per medical case increased 4.6 percent per year on average, slightly higher than a 4.3 percent average annual increase in Honolulu's CPI-U for medical service in the same period. The average benefit per PPD case increased 1.8 percent per annum, and that of TTD case increased 3.6 percent, as compared to overall CPI-U increase of 2.6 percent

Among the other benefit categories, the average benefit for cases involving attendant service had the highest annual growth of 11.7 percent but the potential to reduce the cost in this category is very limited because the total benefit paid for attendant services was only \$0.4 million in 2006. The average benefit for permanent total disability (PTD) had the second highest annual growth of 6.7 percent. Since workers with the PTD cases are not expected to return to

work, controlling the growth of average benefit of this category would generally mean controlling the growth of the benefit level.

In 2006, on a per case basis, the average benefit amounted to about \$2,600 for medical cases, \$16,000 for PPD cases, \$4,200 for TTD cases, and about \$26,000 for PTD cases.

Table 3. Hawaii Workers' Compensation Average Cost by Category: 1990-2006

	Temporary Total Disability TTD (\$/Case)	Temporary Partial Disability TPD (\$/Case)	Permanent Total Disability PTD (\$/Case)	Permanent Partial Disability PPD (\$/Case)	Death Benefit (\$/Case)	Disfigurement (\$/Case)	Vocational Rehabilitation (\$/Case)	Attendant Services (\$/Case)	Medical Services (\$/Case)	Total (\$/Case)
1990	2,397	1,306	9,195	12,248	11,541	400	2,180	4,836	1,283	2,146
1991	2,788	1,346	5,759	12,903	11,623	435	2,413	12,702	1,563	2,425
1992	3,210	1,519	9,049	13,444	13,423	439	2,568	16,208	1,863	2,861
1993	3,615	1,544	9,650	14,137	12,726	491	2,872	11,890	2,242	3,250
1994	3,750	1,714	12,140	14,614	13,498	505	3,162	16,960	2,543	3,662
1995	3,627	1,483	18,582	14,785	16,605	497	3,289	16,887	2,368	3,651
1996	3,422	1,510	20,067	14,624	14,889	520	3,396	23,546	1,999	3,446
1997	3,434	1,451	19,170	14,060	15,587	564	3,665	13,411	2,008	3,319
1998	3,476	1,472	18,597	14,447	14,347	501	3,615	13,592	2,048	3,351
1999	3,508	1,536	19,119	14,462	15,555	498	3,926	16,521	2,135	3,388
2000	3,703	1,531	18,982	14,892	14,326	504	4,381	44,969	2,270	3,531
2001	4,198	1,792	18,781	14,825	19,969	511	4,233	21,737	2,505	3,777
2002	4,267	1,718	23,168	15,164	18,444	515	4,335	14,018	2,626	3,998
2003	4,565	1,850	22,714	15,964	17,482	518	4,498	25,149	2,738	4,203
2004	4,523	1,703	23,839	15,962	17,184	501	4,421	23,638	2,803	4,258
2005	4,331	1,817	24,360	16,270	17,953	489	4,110	19,986	2,644	4,107
2006	4,220	1,706	26,014	16,335	17,601	529	4,563	28,512	2,653	4,155
Annual Growth	3.6%	1.7%	6.7%	1.8%	2.7%	1.8%	4.7%	11.7%	4.6%	4.2%

4. COMPARISON OF COST CONTAINMENT STRATEGIES

Although the historical data indicated that Hawaii WC benefits decreased substantially since 1995, it is still high relative to the national average. In addition, the gap between WC employer costs and employee benefit in Hawaii is greater than the national average and that gap has been increasing over time. In this section, general areas of WC cost containment and the major cost drivers are reviewed, followed by a comparative discussion on the cost containment strategies adopted in Hawaii and other states.

4.1. Areas for Cost Containment and Cost Drivers

Several areas for WC cost containment have been identified in the literature. Both the employers and the state agency could play important roles in reducing WC costs. In general, employers can reduce WC costs by preventing injuries, facilitating speedy return to work, and effective management of claims. Specifically, the employers could employ following measures to reduce WC costs:

- Early intervention to help the injured worker
- Litigating questionable claims
- Using a network of health care providers to deliver quality and cost-effective medical care
- Strengthening management practices and improving labor relations

The state WC agency and the Legislature can create incentives in order to change the behavior of various participants to reduce costs. These incentives may influence the injured workers and the third party in their decisions relating to acceptance of WC benefits, return to work, litigation, and provision and usage of medical care and vocational rehabilitation.

In general, the premium rates are influenced by numerous factors, including types of employers and employees covered by the WC program, benefit levels, statute limitations, waiting periods, administration of the law, collective bargaining agreements, litigation activity, characteristics of the labor force, wage levels, medical fees, frequency of claims, and loss control programs. Some of these factors are under the control of policy makers and administrators of the system and some are not. In this study, the focus is on the factors that can be significantly affected by policy makers and administrators of the system.

Various cost drivers of the WC system have been identified in the literature. These can be classified into three major categories: front-end cost drivers, back-end indemnity cost drivers, and medical prices and utilization. The front-end cost drivers mainly affect the number of claims, while the back-end indemnity cost drivers affect the duration and cost per claim. Medical prices and utilization affect the medical cost of the system.

The front-end cost drivers include: (1) expansion of the scope of compensability (compensating new claims or relaxing standards for traditional claims) by statute, court decision, or adjudicators' practice, (2) reduction in effort to promote safety by employers or increased carelessness by workers, and (3) increased claims by workers. Based on the available data, the Hawaii's WC system does not appear to have a serious problem with respect to the front-end cost drivers.

The back-end indemnity cost drivers are: (1) increasing the duration of disability (such as duration of temporary disability), (2) increasing the eligibility of cases for permanent partial disability (PPD) or wage-loss benefits, (3) increasing the likelihood of a lump-sum settlement, (4) increasing the amount of the PPD benefit, wage-loss, or lump-sum payment, (5) increasing attorney involvement and the number of litigations, (6) delaying a hearing over back-end issues¹², (7) expanding caseloads of claims handlers, (8) changing job markets (highly paid injured workers may face diminished reemployment opportunities at comparable pay), and (9) changing labor relations that could either weaken employees' loyalty and motivation to return to work or reduce employer's willingness to help injured workers return to work.

Medical costs can increase from: (1) rising medical prices, (2) increased use of new medical technologies, and (3) increased use of medical services. As discussed before, from 1990 to 2006, the average cost of medical claims in Hawaii increased 4.6 percent per year on average, while the annual rate of inflation for medical services in the same period was 4.3 percent. Therefore, it appears that the observed increase in medical cost in Hawaii was mainly due to rising medical prices rather than increased utilization. Unfortunately, the medical prices are mostly beyond the control of policy makers and administrators. In the section below, we compare the cost containment strategies adopted in Hawaii and other states.

¹² For example, in Massachusetts and Pennsylvania, benefits could not be terminated or reduced without a hearing.

4.2. Comparison of Medical Cost Containment Strategies

According to a study prepared by the Council of State Governments (CSG) (Melissa and Irakli, 2004), the most commonly adopted medical cost containment strategies in the U.S. include: (1) enactment of laws for employer choice of physicians, (2) usage of health care provider networks, (3) medical fee schedules and mandated bill review, (4) treatment guidelines and utilization reviews, (5) claim management, and (6) promotion of generic drugs. There are advantages and disadvantages of each of these strategies.

Enactment of Laws for Employer Choice of Physician

Currently, individual states regulate injured workers' ability to choose or change medical providers to different degrees. According to the CSG study, 24 states in the U.S. mandate some form of restriction on employee's choice of medical provider for a WC claim. New York, for example, mandates selection from a list of providers prepared by a state agency, while Georgia, Tennessee, and Virginia mandate selection from lists maintained by employers. Ten states give the employers sole responsibility for selecting a physician to handle WC claims. In Hawaii, there is no law either mandating or limiting the employees' choice of medical provider for a WC claim.

The advantages of using employer-selected physicians include: (1) it promotes the use of specific medical provider networks (generally with lower cost), and (2) it discourages over-utilization of medical services. The disadvantages of this practice may include: (1) restricting employees' flexibility and choice of physician, and (2) low quality of medical care received by employees.

According to the CSG study, changing from "employee choice" to "employer choice" can result in roughly 7 to 10 percent savings in medical costs. However, no study has been conducted to quantify the impact of this change on the quality of service or employee's benefits.

Health Care Provider Networks

The health care provider networks consist of health care providers organized to contract with WC insurance carriers to provide health care for injured workers, often at discounted prices. Mandating employer's choice of medical provider can be one way to promote the use of preferred provider networks. Another way is to require insurance carriers to disburse payments

for treating WC patients only to providers with certain occupational medicine credentials or who have participated in state-mandated WC training.

The use of selected provider networks offers a number of benefits. Networks often include occupational medicine specialists with competencies in diagnosing and treating work-related illnesses, injuries and disabilities. The specialized knowledge of injury prevention, workplace hazards and the WC system allows the specialized network of physicians to better coordinate and integrate care for injured workers. In addition, generally networks are known to charge lower prices.

A study conducted by the Workers' Compensation Research Institute (Johnson et al., 1999) indicates that restricting care to designated provider networks would save 15 to 40 percent of medical costs of WC claims. The disadvantages of this strategy may include the possibility of lower satisfaction among the injured workers with service they receive from provider networks. A number of comprehensive studies covering diverse states and time periods have found specialized provider networks to have reduced medical costs. However, the reduced costs are primarily due to fewer services offered by network providers than non-network providers in treating similar cases (Johnson et al., 1999). The question is whether reduced services would mean reduced benefit or poor quality care to the injured workers. Finding the right balance between affordability and quality of care is the key challenge in promoting this strategy.

Medical Provider Fee Schedules and Mandated Bill Review

Most states (41) in the U.S., including Hawaii, have implemented medical fee schedules establishing the maximum reimbursement levels for WC claims. Medical fee schedules are lists of predetermined payments for medical services for injured workers. The services covered and the methodologies for developing reimbursement levels vary widely across states. Medicare's resource-based relative value scale (RBRVS) has emerged as one of the dominant methods in establishing fee schedules. In the RBRVS system, the costs of resources needed to provide medical services determine the payments. Three components make up the cost for each service: (1) physician's work, (2) practice expenses, and (3) professional liability insurance.

The cost of physician work is determined based on several factors, such as the time required to perform the service, the technical skill and physical effort, the mental effort and judgment, and stress due to the potential risk to the patient. The practice expenses are

determined based on the cost of usual supplies, equipment, overhead, staff and general expenses required to perform the service. The professional liability insurance reflects the costs of potential malpractice implications of the service.

In Hawaii, medical provider fee is capped at 110 percent of the Medicare's RBRVS. Medical fee schedules can generate a number of issues relating to access to and quality of care and efficiency. When the medical fee schedule does not cover the cost of the care provided, health care providers are forced to turn away WC patients. The quality of care is likely to suffer if fewer health care providers are available to treat injured workers. In addition, when fee schedules tend to lower the price of medical care, providers may have an incentive to increase the number of visits and the amount of services provided to injured workers unless the number of visits are also restricted. The key to addressing these concerns is a regular revision of the fee schedule based on current conditions in the state and criteria they apply to determine the number of visits and the type of services to be provided to the injured workers based on the type of injuries.

Similar to other price controls, the fee schedule should only be used when the market forces (for example the lack of competition among service providers or the lack of incentives for the injured workers to search cheaper health care providers) fail to determine the right price for medical services for work related injuries. The success of this strategy is critically dependent on the determination of the "right" price.

Medical bill review is the most common used procedure for enforcing medical fee schedules. As a rule, bill review programs evaluate patients' bills to make sure that charges coincide with a fee schedule, no duplicate bills are submitted, and the indicated services were in fact performed. In the U.S., majority of states (33), including Hawaii, rely on private insurance providers for conducting their own bill reviews (without mandated bill review) and require state agencies to review bills only when a dispute develops. Only 17 states mandate regular bill review either by a state WC agency or the insurance company paying the bill or both (Melissa and Irakli, 2004).

Treatment Guidelines and Utilization Reviews

The development and use of treatment guidelines is a new, but rapidly growing practice in WC cost containment. The number of states using treatment guidelines increased from 12 in

1996 to 20 in 2002, including Hawaii. Treatment guidelines provide standards for a reasonable treatment required to relieve the effects of workers' injuries and are presumed correct unless medical opinion established the need for a departure from those guidelines. The guidelines can ensure that injured workers receive the right treatment at the right time, control medical costs, and increase the efficiency of delivering the required medical care. Such guidelines can deter over- and under-utilization of medical services.

The problems of the guidelines include: (1) they may limit the utilization of the latest medical innovations and technologies, and (2) they may hinder the development of more effective treatment for injuries sustained in a constantly changing workplace environment. The key to solving these problems is to revise the guidelines based on the most recent information available.

Currently, most states with treatment guidelines have no statutory requirements to review treatment guidelines and instead they respond to complaints to identify outdated areas and implement changes on an "as needed" basis. Five states (not including Hawaii) require that guidelines be reviewed regularly. Three states (not including Hawaii) mandate reviews, but have no specific schedules for review.

Utilization review is one way to make sure that guidelines are being followed. In 2002, 19 states (not including Hawaii) had mandated utilization reviews. Of these, 12 states required utilization review programs for private insurers only, seven states required state agency or exclusive state fund to perform the review, and two states mandated both private insurers and state entities to perform the review. States should balance the need for using utilization review against the need for easy and expedient access for patients to the required medical services.

Case Management for WC Claims

Case management for WC claims is a proactive approach that assigns a manager (usually a nurse) to an injured worker to craft individualized treatment and care plans. The goal of case management is to ensure a comprehensive treatment plan to meet particular health care needs of every injured worker. Typically, a case manager is assigned to a patient to oversee every step of his or her treatment, including referrals to qualified specialists, expedited office visits and avoidance of treatment delays. Depending on the nature of the case management, this measure appears to have increased the benefit of the injured workers, but its impact on the WC cost has

not been quantified. The reduced medical cost due to more efficient management needs to be balanced by the increased expense to hire the case managers.

Only two states (Colorado and Tennessee) mandate case management for WC claims. In 18 additional states (not including Hawaii), managed care organizations are required to provide case management in order to obtain state certification for covering WC claims (Tanabe and Murray, 2001).

Promotion of Generic Drugs

Since WC laws require that the injured workers pay nothing for their treatment, employers cannot use the financial incentives, such as co-payment or deductibles to control medical treatment or costs. Instead, state officials can cut costs by promoting the use of less expensive generic drugs over more expensive brand-name alternatives for WC programs.

As of 2003, 19 states, including Hawaii, have enacted laws that require pharmacies to dispense only a generic drug for WC injuries if the generic drug exists for a given injury and if the physician does not prescribe a specific non-generic drug (Prince, 2002).

4.3. Comparison of General Cost Containment Strategies

In addition to the specific strategies described above, there are also some other general cost containment strategies. These include: (1) deregulation and competitive premium rates, (2) alternative insurance options, such as self-insurance and pooled insurance, (3) advisory councils, (4) technological innovations, (5) streamlined WC systems for state employees, (6) fraud prevention, and (7) curbing litigation in the WC systems. These strategies are described next.

Deregulation and Competitive Premium Rates

The WC premium rates can be determined in three ways: (1) administered pricing, (2) partial deregulated rating, and (3) competitive rating. Administered pricing is a uniform rating system in which all insurance carriers in a state use the same classification rates established by a rating organization. The most widely adopted forms of partial deregulation are the “deviations” and “schedule rating.” In states that allow deviations, individual carriers can adopt rates that differ from those established by rating organizations. While the degree of the deviations varies among insurers, deviations offered by a particular insurer must be uniform among all

policyholders in the state and have to be approved by the state insurance commissioner. Under scheduled rating plans, insurers can decrease the rate an individual employer would otherwise pay, based on a subjective evaluation of factors such as the employer's safety programs. Such plans are created by the rating organizations, are subject to the insurance commissioner's approval and are uniform for all insurers operating in a particular state. A truly competitive rating system allows each insurance carrier to quote rates based on its own experience of claims, losses and other insurance factors.

Hawaii is one of the 37 states (as of 2001) that have adopted competitive rating, in which employers can shop around for the best rate, causing the insurance prices to go down. When a state moves from pure administered pricing to comprehensive deregulation, employers' cost can decrease by 11 percent (Thomason, 2001).

The impacts of deregulation on employers' cost depend on the level of competition among insurance carriers. If serious competition does not emerge after the deregulation, impacts of deregulation on employers' cost will be very limited or be even negative. As discussed before, the profitability of Hawaii's WC insurance carriers was about 74 percent higher than the national average in 2005. For the private carriers with active licenses in DCCA, total employee benefit paid decreased more than half from \$243 million in 1994 to \$109 million in 2006, but total premium received remained the same at about \$356 million. Further studies are needed to determine the reasons for this growing gap between total benefit received by employees and total premium collected by insurance carriers in Hawaii.

Self-Insurance and Pooled Insurance Options

Large employers often form their own single-parent captive insurance arrangements. Such arrangements may allow contracting with an insurer to administer claims on the employer's behalf without the insurer taking any risk. A self-insured employer can save the cost of insurance for two reasons. First, the employer does not have to pay a risk premium to the insurer. Second, premiums may decrease due to savings from lower overhead expenses. In addition, industry data reveal that self-insurance programs have lower costs than traditional WC schemes (Hickey, 2003). As discussed before, in 2005 the loss ratio for self-insured employers in the U.S. was 84.2 percent, about 52 percent higher than that of the private carriers.

If a small company in a particular industry cannot obtain competitive rates in the commercial insurance market and the company is willing to share in its own and others' risk, group funds can offer a viable alternative in the states that permit group self-insurance. Such group (pooled) self-insurance systems permit small employers in similar industries to band together and benefit from more competitive rates. In this arrangement, group members will have a vested interest in keeping costs low.

The share of self-insured funds was higher in Hawaii than the U.S. average. In 2005, self-insured funds accounted for about 32.4 percent of total WC benefits in Hawaii, as compared to 25.3 percent of non-federal total benefits in the U.S.

Advisory Councils

Advisory councils have emerged as effective mechanisms for resolving conflicts between business and labor interests. As of 2001, 36 states (not including Hawaii) had implemented labor-management advisory councils to minimize the conflict among competitive interests in the WC system (Fox, 2001). Advisory councils effectively play the role of legislative "gatekeepers". The proposed legislative changes that do not reflect a consensus of labor and business interests stop at the council and cannot reach the Legislature. Councils also examine the state administrative agency's suggestions for regulatory changes to ensure that the proposed changes are consistent with the interests of both the employees and the employers.

Wisconsin is often cited to have an exemplary advisory council arrangement (Fox, 2001). In Wisconsin, the advisory council includes voting members and non-voting members. The voting members include labor and business representatives and the chairperson of the administrative agency, while non-voting members include three representatives of the insurance industry. In addition, the council also informally includes three liaisons to the medical community and several *ex officio* legislators. By forming such coalitions, the council can ensure that the final legislation reflects the balanced interests of all stakeholders. This, in turn, minimizes the possibility of future conflicts.

Based on the above, it appears that Hawaii could also improve its WC system by establishing a similar advisory council. It should be noted that the large political, economic and institutional frameworks within which the councils operate exert considerable influence on their

effectiveness and differ across states. Therefore, significant modifications should be made to the existing system if Hawaii intends to adopt the Wisconsin model.

Technological Innovations

Some states have taken advantages of various technological innovations for enhancing the operational efficiency of their WC systems and reducing costs. New Jersey has one of the most technologically advanced WC infrastructures in the U.S. Case listings, court records, filings of claims, and accident reports are available to all parties electronically through an expansive and secure computer network. These innovations have helped the state to lower administrative costs and boost its efficiency without reducing the quality of services to injured workers (Calderone, 2003). Hawaii can also improve its WC system by adopting these and other similar innovations.

Streamlining WC Systems for State Employees

For states that provide state insurance funds, streamlining the state-run insurance system can greatly enhance efficiency and save big money. An illustrative example is North Dakota, where until 2001, 143 state agencies dealt separately with the state Workers' Compensation Bureau for WC insurance coverage. To remedy this inefficiency, the North Dakota's Legislature gave the Risk Management Division the responsibility for administering a single WC account covering all the state agencies. This change saved the state \$1.5 million in 2002 (Zolkos, 2003). In Hawaii, the State Department of Human Resources is responsible for handling claims filed by Executive Branch employees (not including UH and DOE) and the Legislature.

Fraud Prevention

To fight fraud in the WC system, some states have instituted special investigation units to track down allegations of fraud and refer the fraudulent cases to the appropriate officials for prosecution. Some states require companies to inform their employees about fraud control programs and regulations. Many states require that fraud warning statements be included on applications for insurance and renewals. Several states have revised their laws to make it a felony for anyone to knowingly file a fraudulent WC claim. In Hawaii, a WC fraud constitute a: (1) Class C felony if the value of the moneys obtained or denied is more than \$2,000, (2)

Misdemeanor if the value of the moneys obtained or denied is less than \$2,000, and (3) Petty misdemeanor if providing false information did not result in any monetary loss. Although these laws can deter persons from committing a fraud, they also can carry a risk of creating a burden on injured workers to file and receive compensation for legitimate claims (McNulty, 2003).

Fraud warning is necessary because it tends to reduce fraud without increases in WC cost. Whether or not Hawaii should establish a special investigation unit to track down fraud (and how much money and efforts should be used in such unit) depends on the cost-benefit trade-off of such a measure. According to the DLIR, employers have expressed concerns that the investigation and prosecution of fraud can be too costly. As a result, between 1999 and 2002, there were only 83 fraud complaints filed by the DLIR. Of these, 50 were filed against employers, doctors, and vocational rehabilitation providers, but none of these complaints were upheld. Remaining 33 complaints were filed against employees, and 18 of them were upheld. The main benefit of fraud investigation is to deter the parties from taking improper advantage of the WC system (DLIR, 2004).

Litigation Controls

Litigation in the WC system can be very costly. In order to minimize the consequences of workplace injury while keeping employer costs low, states may provide incentives to resolve disputes over benefits outside the courts. The Worker's Compensation Research Institute has studied state mechanisms of dispute resolution and identified several factors that encourage litigation. These factors include: (1) absence of ratings or other evaluation guidelines, (2) lack of oversight by the state agency, (3) heavy reliance on the ratings of adversarial experts hired by both sides of the dispute, (4) practice of splitting the difference between adversary ratings to resolve the dispute (for example, using the average value of alternative ratings to determine the final WC benefit), and (5) systems where small differences in expert opinion or medical rating result in large differences in award outcomes (Boden, 1988).

Evidence from Wisconsin indicate that various administrative and adjudicative mechanisms can reduce litigiousness in WC systems, including: (1) active supervision by the state agency, (2) required minimum ratings for surgery claims, (3) heavy reliance on the treating physician, and (4) dispute resolution by "final-offer adjudication" (Boden, 1988).

Court rulings often involve splitting the difference between the two parties' positions. This method of medical assessment counterbalances different opinions and thereby promotes the extreme behaviors. As a result, attorneys tend to seek doctors willing to present the most extreme positions, making negotiated settlements difficult because of a large difference between the opinions of two parties. In contrast, "final-offer adjudication" requires that only one medical position is accepted, instead of the average of two positions. A study has linked this adjudicative feature to a low level of WC litigation in Wisconsin (Boden, 1988).

5. REFORM PROPOSALS AND POLICY RECOMMENDATIONS

In this section, proposed legislative changes to Hawaii's WC system in recent years are discussed briefly, followed by a review of the recent reforms to California's WC system and summary of our major conclusions and recommendations.

5.1. The DLIR Proposed Legislative Changes

Since 2003, the DLIR has made reforms to the Hawaii's WC system a top priority. In 2004, the DLIR conducted an internal study and submitted a report to the 2004 Legislature (DLIR, 2004). The report identified key cost drivers and areas of improvement in Hawaii's WC system. The DLIR also submitted an omnibus WC reform package to the 2004 and 2005 legislative sessions, focusing on several key cost drivers identified by its 2004 study. Both omnibus bills were rejected in their entirety by the legislature. The DLIR omnibus package included eleven legislative changes, as summarized below.

1. Changing the definition of attending physician in section 386-1, Hawaii Revised Statutes (HRS).
2. Amending the definition of employment in section 386-1, HRS.
3. Defining maximum medical improvement and temporary total disability in section 386-1 and section 386-31, HRS.
4. Redefining mental stress in section 386-3, HRS.
5. Allowing employer mandated choice of physician, expanding fees for emergency room care, and allowing greater flexibility in the medical fee schedule in section 386-21, HRS.
6. Amending section 386-22, HRS to conform to the changes in section 386-1, HRS.
7. Amending vocational rehabilitation in section 386-25, HRS.
8. Amending frequency guidelines in section 386-26, HRS.
9. Amending temporary partial disability in section 386-32, HRS.
10. Providing an amendment for alternative dispute resolution in section 386-32, HRS.
11. Amending the fraud violations and penalties and the insurance fraud investigations unit in section 386-98 and section 431:10C-307.8, HRS.

The following is a detailed discussion of the above legislative changes proposed by the DLIR.

Changing the Definition of Attending Physician

Under the current Hawaii's WC law, an injured worker can have only one attending physician or primary health care provider. The attending physician can authorize additional treatment and make referrals to other health care providers as needed. Currently, the attending physician can be a doctor of medicine, a dentist, a chiropractor, an osteopath, a naturopath, a psychologist, an optometrist, and a podiatrist. The DLIR recommended limiting the attending physician to medical doctors and dentists only.

The DLIR recommendation was mainly based on three arguments. First, the goal of WC is to restore an injured worker as fast as possible to pre-accident status in a manner that is cost-effective for the whole system. Second, many employers complain that alternative medical practitioners do not cure injuries and are inappropriate for WC. Based on some studies, physician-directed care is less costly than chiropractic-directed care and alternative medicine is not a cost-effective means of treating injured workers. The third argument is mainly based on a survey conducted by the First Insurance Company of Hawaii (First Insurance) in 2003. Based on this survey, the average medical cost per claim was \$1,048 for cases served by other health care providers (including medical doctors), while the average cost for cases served by chiropractors, physical therapists, and massage therapists was \$11,232. However, as indicated by the First Insurance study, the comparison is not an exact side-by-side comparison because medical doctors may not treat the same type of injuries as chiropractors, physical therapists, and massage therapists do. In fact, based on the same survey, the average indemnity (the lump-sum payment to the injured worker based on the severity of the injury) paid per claim was \$1,718 for cases served by other health care providers, while the average indemnity paid for cases served by chiropractors, physical therapists, and massage therapists was \$23,760, almost 14 times higher than the average indemnity for cases served by other health care providers. Since the indemnity is closely related to the severity of the injury, the difference in average medical costs may be due to the difference in the severity and type of injuries treated.

However, other national studies also support the First Insurance study. According to a study conducted by the Workers' Compensation Research Institute (Victor and Wang, 2002), medical costs can increase up to 30 percent in some states when the patient is not treated by a medical doctor. Although the proposed change would reduce the employee's choice of attending physician, it does not preclude the use of chiropractors and other service providers. There is a

potential to make such a change in such a way that both employers and the employees will be better off.

Amending the Definition of Employment in Section 386-1, HRS

Currently, DLIR requires individual members with employees of a limited liability company and partners in a partnership to obtain WC coverage. The DLIR proposed amendment will give small business owners meeting certain requirements the option not to obtain WC insurance regardless of the form of their business structure. Sole proprietors have been excluded from obtaining coverage. The proposed amendment will also allow owners and partners of corporations the option of not obtaining WC coverage for themselves as individuals. This proposal does not seem to have any negative impact on the system and provides more choice for small business owners.

Defining Maximum Medical Improvement and Amending Temporary Total Disability

This proposed change defines maximum medical improvement (MMI) as the point when no further improvement in the injured worker's condition is expected from the continuation of curative health care or the passage of time. This amendment would eliminate most palliative care and temporary total disability (TTD) payments after MMI has been achieved. TTD is meant for injured workers whose total disability is not permanent and who are expected to return to the workforce. The proposed change, in concert with the definition of MMI, would limit TTD payments to 104 weeks. Based on the proposed change, if the injured workers have not exhausted the 104 weeks, but there is disagreement on whether MMI has been reached, the injured workers can petition the DLIR for continuation of TTD payments for the remainder of the 104-week cap. If the injury continues to deteriorate, the employee can petition the Director of DLIR for an extension of TTD payments beyond the 104 weeks.

Currently, most states, including Hawaii, have no TTD benefit duration limit. In 2003, there were 16 states with TTD benefit duration limits, with the limit varying from a low of 104 weeks to a high of 500 weeks. There were only three states with TTD benefit duration limit of 104 weeks (Melissa and Khodeli, 2004).

Redefining Mental Stress in Section 386-3, HRS

This proposed change intended to disallow WC claims for mental illness or injury proximately caused by all personnel actions taken in good faith by the employer. Such personnel actions include disciplinary actions, counseling, work evaluation or criticism, job transfer, lay-off, promotion, demotion, suspension, termination, retirement, or other actions ordinarily associated with personnel administration. In 1998, the Hawaii's Legislature amended Section 386-3, HRS to exclude injuries arising from "good faith" disciplinary action from being compensable. However, injuries arising from all other good faith personnel actions are still compensable.

The DLIR argued that this measure will ensure that employers, who exercise their lawful right to take good faith personnel actions that are not disciplinary in nature, can do so without fear of inflated WC insurance costs and stress claims. This argument is based on the assumption that if the employers are not "at fault" then they should not be responsible for the associated costs. However, as discussed previously, the WC system was created to insure that a worker who sustained an occupational injury or disease arising out of and in the course of employment would receive predictable compensation without delay, irrespective of who was at fault. Under the exclusive remedy concept, the worker accepts workers' compensation as payment in full and gives up the right to sue the employers.

Mental disease has been a challenge to the WC system since its inception. The complexity of the causal relationship between psychological, emotional, and nervous disorders and work environment and the subjective analysis of various mental disorders have been a challenge for the development of objective standards of the WC system.

Most WC claims are filed as a result of a physical injury. According to the National Council on Compensation Insurance, stress-related claims accounted for only 0.15 percent of all U.S. WC claims in 2002. There are three types of stress-related claims that can be filed under WC: (1) a physical-mental claim, which describes a compensable physical condition that leads to a mental condition or disability; (2) a mental-physical claim, which describes a mental stress that results in a physical condition; and (3) a mental-mental claim, which describes a mental stress that leads to a mental condition or disability. All states in the U.S. compensate for physical-mental and mental-physical claims. There is no compensation for mental-mental claims in

eleven states. The remaining states either have standards which vary within the state or have not set a judicial precedent for mental-mental claims (U.S. Worker's Compensation Laws).

Jurisdictions throughout the U.S. have had divergent opinions with regard to the recognition of psychiatric disability following mental disorders. Two major schools of thoughts exist with regard to this area of the law. The Michigan approach is that an injury caused by gradual mental stimuli is considered compensable. On the other end of the spectrum of the jurisdictional split is Wisconsin's so-called "objective" approach, where "out of the ordinary stress is required." The test for compensability for mental disease following mental stress requires that there be a situation of more than normal day-to-day stress and tensions which employees experience.

The rulings of stress claims caused by personnel actions depend on how broad or narrow a jurisdiction has interpreted compensability in these cases. Where they are allowed, frequently they are limited, and require such things as physical manifestations, an unusual stress, a sudden stimulus, or an active versus passive role of the employment. In jurisdictions which require only ordinary stress, most personnel issues would be compensable if the stress contributed to an emotional breakdown. Other jurisdictions have looked at whether the employer's conduct was reasonable and/or in good faith based on all the circumstances. It should be obvious, however, that looking at the reasonableness of either employer or employee behavior injects a tort liability concept which is incompatible with a no-fault system.

Allowing Employer Mandated Choice of Physician, Expanding Fees for Emergency Room Care, and Allowing Greater Flexibility in the Medical Fee Schedule

This proposed change includes three components. The first one would require the injured workers to see a physician selected by the employer for the first 120 days from the day of injury. Act 234 capped medical fees at 110 percent of the Medicare Medical Fee Schedule. The second component would allow for usual and customary fees to be charged for Emergency Room Care up to 48 hours from the point of injury. The usual and customary fees would be capped to not exceed 200 percent over the Medicare Medical Fee Schedule. The third component would allow greater flexibility in the medical fee schedule. Currently, if health care providers want to adjust the medical fee schedule, they must petition the DLIR with the specific codes they want to be reimbursed at a higher level. The Director of DLIR is mandated to perform a statistically valid

survey of the prevalent charges for fees for related services. This process can be expensive and very time consuming. This amendment would allow third parties to submit to the Director of DLIR an actuary, which if the Director of DLIR deems valid, can be used in updating the fee schedule.

As discussed before, price control is a regulation technique which can be used to control the negative impacts of market failure. If the caps were set too high or too low, they should be adjusted. However, in determining the empirical evidence required to set the right cap level, policy makers should balance the cost of collecting these evidence and the accuracy of the evidence. The issue here is whether or not the actuary provided by the third parties can replace the statistically valid survey with acceptable accuracy.

Amending Vocational Rehabilitation in Section 386-25, HRS

Under the current law, the employees select their own vocational rehabilitation plan and vocational counselor, without any input or oversight by the employers. The proposed change mandates the involvement of the attending physician, vocational rehabilitation plan designer, employer and employee in designing and reviewing the vocational rehabilitation program. The amendment mandates that the employer, employee and plan designer review the effectiveness of the plan after 26 weeks for extension approval. If a disagreement exists on the design of the plan or its review, then any party can petition the Director of DLIR to settle the disagreement. The amendment would also limit vocational rehabilitation to a maximum of 104 weeks and disallow vocational or academic instruction permitting the employee to become self-employed. The amendment also allows for an employer to redesign the injured employee's job through changes to the work process or function, providing alternative work within the employee's ability, or locating reemployment for the employee to satisfy the employer's obligation under vocational rehabilitation.

Amending Temporary Partial Disability in Section 386-32, HRS

Under the current law, temporary partial disability (TPD) benefits equal to sixty-six and two-thirds percent of the difference between the employee's average weekly wages before the injury and the employee's weekly earnings thereafter, subject to the schedule for the maximum and minimum weekly benefit rates prescribed in section 386-31. The minimum weekly benefit

rate is \$38 or twenty-five percent of the foregoing maximum amount, rounded to the nearest dollar, whichever is higher. Under the current law, some employees may receive more than their regular wages before injury while collecting TPD due to the minimum weekly benefit requirement. For example, an injured worker returned to a light duty job with 10 percent less wage than the wage of the regular job before injury and collecting 25 percent of the regular wage as TPD benefit would earn a total income 15 percent higher than the regular income. This may deter the injured workers from returning to their regular job before injury. The proposed change intends to remove the minimum weekly amount for receiving TPD benefits.

Providing an Amendment for Alternative Dispute Resolution in Section 386-32, HRS

This amendment intends to establish a strong public policy, encouraging arbitration and mediation in resolving differences. It is patterned after Hawaii's arbitration laws, Chapter 658. This amendment also provides the fundamental requirements of a valid and enforceable arbitration/mediation agreement. It sets forth rules governing arbitration/mediation in the WC system.

According to the DLIR, arbitration and mediation should be encouraged so that cases pending hearing before the DLIR can be resolved through an alternative means. This will reduce the DLIR's caseload, and the duration of time that the case is in the WC system. It is not intended to add another layer to the DLIR hearing process. A decision by the arbitration/mediation can be vacated by the DLIR if an award is procured by fraud, corruption, or other undue means. The DLIR may also vacate the award if there is evidence that there was partiality, corruption or misconduct by the arbitrator.

Amending the Fraud Violations and Penalties and the Insurance Fraud Investigations Unit in Section 386-98 and Section 431:10C-307.8, HRS

This proposed measure intends to expand the state's Insurance Commissioner's jurisdiction to investigate and prosecute WC fraud. According to the DLIR, the state has investigated and prosecuted very few fraud cases. Between 1999 and 2002, there were only 33 fraud complaints against employees filed and only 18 of them were upheld. None of the complaints filed by employees against employers/insurance carriers were upheld. Employers have complained that the investigation and prosecution of fraud is too costly. Currently, any

award that is won goes into the state's Special Compensation Fund. The proposed amendment would allow the party who successfully investigated a fraud situation and won a determination to keep 50 percent of any award granted. In addition, the successful party could recoup all payments made and receive reimbursement for attorney's fees.

5.2. Other Proposed Legislative Changes

In addition to the DLIR proposed legislative changes describe above, there are also other legislative changes proposed by other parties. Some of these proposed reforms are similar to those included in the DLIR omnibus bills discussed before. These other major proposed legislative changes in recent years can be grouped into the following categories: (1) reforms mainly benefiting the injured workers, (2) reforms mainly benefiting the employers, (3) reforms benefiting both employers and injured workers, (4) reforms in WC fraud prevention, and (5) other reforms.

Reforms Aimed at Benefiting the Injured Workers

The proposed reforms in this category include the following:

- Prevents the termination of temporary total disability benefits until the Director of DLIR decides to terminate them by amending Sub-section (b) of HRS Section 386-31 (HB854, 2007).
- Prohibits an employer from suspending or discontinuing benefits to an injured employee without an order from the DLIR Director. Such an order shall not be issued until after a full and fair hearing at which the injured employee is given ample opportunity to review the employer's evidence and present rebuttal (SB1564, 2006).
- Prohibits employers from issuing denials of treatment in workers' compensation cases pending an evaluation by an impartial physician or pending the outcome of a department hearing. Increases maximum allowable charges for medical care, services, and supplies (SB2691, 2006).
- Ensures that uninterrupted medical care is provided to an injured employee, even if the injured employee's employer denies further treatment, until the Director of DLIR renders a final decision on the matter by amending Sub-section (c) of HRS Section 386-21 (HB855, 2007).

- Subjects the employer-selected "independent medical examiner" to general medical malpractice standards as applicable in Hawaii by amending HRS Section 386-79 (HB53, 2007).
- Requires prepaid health insurance to provide benefits to an employee when workers' compensation coverage is denied (HB1893, 2006).
- Requires agreement of employee in physicians selected by the employer to conduct an impairment examination. Requires the employer to reimburse the employee for lost wages or expenses in relation to the medical examination by employer's physician. Provides for due process for the suspension or discontinuance of benefits and imposes penalties (SB1562, 2006).
- Allows a workers' compensation claimant and the claimant's attorney to negotiate the attorney's fees (HB1263, 2006). The employee and employee's attorney may negotiate the hourly rate to be paid as attorneys' fees. An attorney's request for approval of attorneys' fees to the DLIR Director or to the appellate board shall include a copy of the engagement agreement, signed by the employee, and an itemized statement of services rendered. In the event of an objection to the fee request by the employee, the director shall review the request and the supporting documentation and may approve or modify the fee request as appropriate based on all relevant factors, including but not limited to the engagement agreement, the experience of the attorney, the difficulty of the case, and the outcome of the claim.
- Prohibits an employer from suspending workers' compensation benefits to an injured employee without an order from the Director of DLIR. Provides compensation to permanently or temporarily disabled employees within 30 days of injury. Requires that an employer receive prior authorization from the Director of DLIR prior to requesting an employee to submit to a medical examination by an employer's physician (HB341, 2006).

Reforms Aimed at Benefiting the Employers

The proposed reforms in this category include the following:

- Requires that the application of all Medicare fee schedules, rather than just the Medicare Resource Based Relative Value Scale, apply to workers' compensation claims. Requires workers' compensation insurers to identify overall cost savings and apply them to rates on

new and renewal policies issued from February 1, 2007 to January 31, 2010 (HB2450, 2006). This bill also intends to ensure that the resulting cost savings are reflected in future premium rates.

- Authorizes an employer to mandate that an injured employee whose injury is compensable under workers' compensation to select from an employer designated healthcare provider list (HB977, 2006).
- Allows employers the opportunity to provide their employees with an employer-designated healthcare provider list of attending physicians and/or physician networks. Injured employees would be allowed to "opt out" of the plan after 120 days and see physicians that are not on the list (HB1381 and SB1467, 2007).
- Authorizes employers to establish medical provider networks to provide medical treatment to injured workers (HB1600, 2006).
- Establishes a workers' compensation insurance premium discount for businesses that establish and maintain a return to work program that is certified by the DLIR (HB1802, 2006).
- Disallows workers' compensation claims for mental illness or injury proximately caused by all personnel actions taken in good faith by the employer (HB1380 and SB1466, 2007).
- Removes workers compensation coverage for stress claims and injuries/damages from any act of violence, appropriate funds to establish a workers' compensation fraud hotline, and requires designation of a deputy attorney to investigate and prosecute workers' compensation fraud violations (SB120 and SB69, 2007).
- Establishes loss of workers' compensation benefits for substantial noncompliance with recommended treatment plan. Exempts noncompliance with treatment plan for good cause from loss of benefits penalty. Establishes a limit of 24 visits per year to chiropractor or massage therapy for a work-related injury. Provides process to streamline medical information release as it relates to work-related injuries (HB984 and HB1657, 2006).

Reforms Benefiting both Employers and Injured Workers

The proposed reforms in this category include the following:

- Requires workers' compensation insurance premiums to be rolled back by 20 percent after July 1, 2008. Prohibits workers' compensation insurance premium rates above the maximum earned premium and below the minimum earned premium. Establishes a formula for the determination of the maximum earned premium and minimum earned premium. Authorizes consumers to initiate or intervene in any workers' compensation insurance rate making proceeding (HB2451, 2006).
- Requires workers' compensation insurers to provide annual reports to the Director of DLIR (HB970, 2007). The annual reports of its policy costs should include, but is not limited to, the costs of independent medical examinations, costs for legal services, and administrative costs.
- Requires reporting the denial of all claims on an annual basis. All denials of claims shall be reported to the employer on an annual basis, along with the dates of injuries or alleged injuries, the dates when employer's reports were filed, the dates of denials or the dates compensability was accepted, and the dates of subsequent appeals and status of appeals (SB1563, 2006).
- Allows negotiation between employers and public unions over workers' compensation coverage and benefits (HB867, 2007).
- Provides for alternate dispute resolution to resolve controversies arising from workers' compensation claims (HB1382, 2007). The purpose of this change is to create guidelines to expedite the resolution of controversies through alternative measures in addition to the administrative hearings process for workers' compensation claims. This will allow workers' compensation claims to be resolved in a timely manner, thereby enabling faster payments or benefits to the injured workers.
- Requires medical providers to treat injured workers in accordance with clinically tested, evidence based treatment guidelines. Requires medical providers to utilize the Official Disabilities guidelines ("ODG") Treatment in Workers' Comp, 3rd edition (HB1386 and SB 1472, 2007).
- Ensures that the adoption of treatment guidelines will not be presumed to be the only effective and appropriate prescription for treating injured workers (HB1269, 2006). This

bill intends to amend Section 386-21, HRS, such that the Director of DLIR may adopt rules designed to ensure the delivery of reasonably and necessary medical care to employees and, in doing so, may consider scientifically and medically recognized treatment guidelines, provided that the guidelines shall not be presumed to be the only effective and appropriate prescription for the treatment of the injured employee. Procedures for the approval or disapproval of treatment plans may be adopted by the Director of DLIR.

Reforms in WC Fraud Prevention

The proposed reforms in this category include the following:

- Specifies that any person committing felony insurance fraud in motor vehicle insurance, private health insurance, mutual benefit health insurance, health maintenance organization health insurance, and worker's compensation insurance areas will be subject to repeat offender increased sentencing guidelines if that person has a previous conviction for the crime of felony insurance fraud (SB1414 and HB1328, 2007).
- Expands the Department of Commerce and Consumer Affairs' (DCCA) jurisdiction over insurance fraud to include workers' compensation cases, until July 1, 2010. Appropriates funds for additional personnel and resources within the department to combat insurance fraud (HB88, 2007).
- Authorizes recovery of attorney's fees and costs under workers' compensation law by any person, who successfully defends any charge of workers' compensation insurance fraud, except for criminal cases, against the person who initiates and prosecutes the action. Authorizes the Insurance Commissioner to investigate complaints and prosecute cases of workers' compensation fraud, provided that the complaint is against an insurance carrier, a self-insured employer, or a full-insured employer (HB305 and HB1307, 2006).
- Replaces the Insurance Fraud Investigations Unit with the Insurance Fraud Investigations Branch and broadens its authority to the investigation and prosecution of insurance fraud relating to all lines of insurance, including workers' compensation. (HB2323, 2006)
- Expands the authority of the insurance division's insurance fraud investigations unit to prevent, investigate, and prosecute both civilly and criminally insurance fraud within the workers' compensation insurance line within the State of Hawaii (HB2324, 2006).

- Provides definitions of WC insurance fraud in the first, second, and third degree. Workers' compensation insurance fraud in the first degree is a class B felony (HB699, 2006).

Other Proposed Reforms

The proposed reforms in this category include the following:

- Requires employer-requested medical examinations for workers' compensation cases involving the determination of permanent impairment to be performed by a physician selected by mutual agreement of the parties, or if no agreement, by a physician appointed by the Director of DLIR (HB982, 2007).
- Disallows workers' compensation benefits for the exacerbation of injuries sustained during after work, voluntary recreational or social activities (HB1754, 2007).
- Disallows workers' compensation benefits for injuries sustained during after work employer-sponsored voluntary recreational or social activities. Clarifies that the calculations of permanent partial disability awards are patterned after those of permanent total disability awards (SB117, 2007).
- Requires occupational diseases to be considered work injuries that are compensable under workers' compensation law (HB866 and SB903, 2007). This proposed change intends to add a new and clear definition of occupational disease in Section 386-1, HRS.
- Allows the Director of DLIR to adopt rules for the delivery of reasonable and necessary medical care to injured employees, and may take into consideration scientifically and medically recognized treatment guidelines (SB1568, 2006).
- Prohibits an insurer from including in the calculation of the premium rates any payments for holiday or weekend pay for hourly wage employees (SB2024, 2006).
- Permits the Director of DLIR to reopen worker's compensation case after settlement if settlement has been obtained by the exertion of undue influence over any party or as a result of the disability or mental incompetence of the employee. Requires private employers who provide pension plans to their employees to allow an employee who has vested to receive pension payments upon becoming disabled, regardless of age (HB1015, 2007).

- Specifies further conditions under which temporary total disability benefits for workers' compensation may be terminated. Authorizes continuation of benefits upon a finding that maximum medical improvement has not been achieved or that the injury is deteriorating (HB978, 2006).
- Requires the Director of DLIR, with input from interested stakeholders in the workers' compensation system, to establish standardized forms for medical service providers to use when reporting on and billing for injuries compensable under the State's workers' compensation law (HB2698, 2006).
- Requires the Hawaii Employers' Mutual Insurance Company (HEMIC) to provide a workers' compensation insurance plan that utilizes a coordinated system of care model to provide medical and rehabilitation services to injured employees (HB2695, 2006).
- Regulates coordinated care organizations in the treatment of workers' compensation injuries (HB1172, 2006). This bill intends to add a new part to Chapter 386, HRS. The new part includes detailed requirements for a coordinated care organization plan.
- Increases the percentage of the Medicare Resource Based Relative Value Scale system applicable to Hawaii for which medical service providers may charge for treating workers' compensation related injuries from 110 percent to 130 percent (HB2226, 2006).
- Prohibits a health care provider from referring a workers' compensation claimant to a non-diagnostic treatment or rehabilitative service corporation or other business entity in which the referring health care provider owns a proprietary interest. Exempts referrals made by health care providers employed by health maintenance organizations from the prohibition (HB1828, 2006).
- Amends workers' compensation law, including limiting an employer's ability to terminate benefits, authorizing the recovery of attorney's fees and costs by the injured employee, specifying procedures for medical examinations by the employer's physician, establishing fines for violations, requiring the reporting of denials of claims and relevant information, and further restricting the Director of labor and industrial relations' rulemaking authority (HB763 and SB1622, 2007).
- Excludes from the definition of "employment" under workers' compensation law: service performed by: (1) a sole proprietor or a partner of a partnership, as defined in the partnership law, if the partner is an individual, and (2) a member of a limited liability

company if the member is an individual and has a distributional interest as defined under the Uniform Limited Liability Company Act, of at least 50 percent in the company. Provides for fees to be charged under certain circumstances (SB770, 2007).

- Requires the State and the courts to recognize the validity of labor-management agreements that meet certain specified requirements. Requires HEMIC to act as an insurer for labor management agreements in certain instances (HB2646, 2006).
- Establishes a coordinated care system option to provide workers' compensation benefits for public employees (HB2647 and HB1783, 2006).
- Establishes a system of comprehensive health coverage that allows workers' compensation, medical insurance, and no-fault personal injury protection coverage to use a single fee schedule and deliver services through managed care. Also establishes a pilot program for state and county employees to be administered by the Hawaii employer-union health benefits trust fund (HB535, 2006).
- Amends workers' compensation law, including but not limited to mandating further requirements for vocational rehabilitation providers, temporarily limiting the rulemaking authority of the Director of DLIR and specifying procedures for filing of claims (HB1773, 2006).

5.3. The DLIR Proposed Administrative Rule Changes

In January 2005, the DLIR proposed significant changes to administrative rules pertaining to the Hawaii WC system. The proposed changes focused on three areas: (1) improving the WC hearing process by providing clear directives on the hearing process, (2) instituting evidence-based medical treatment guidelines by adopting Chapters of the American College of Occupational and Environmental Medicine Practice Guidelines and the Official Disability Guidelines (ODG), and (3) reforming the vocational rehabilitation process. Subsequently, the Governor approved the first two changes and rejected the third one. However, the 2005 Legislature nullified the approved administrative rules, thereby returning the WC system to the status quo.

Improving the Hearing Process

Currently, there are no administrative rules governing the WC hearing process in Hawaii. According to the DLIR (DLIR, 2007), the WC hearing system in Hawaii is plagued with complaints of inefficiency, irregularities, and soaring costs. This led to a hearing process that was unpredictable and gave the appearance of favoritism with regard to scheduling and conducting hearings. This proposed administrative rule included three components: (1) it intended to provide clear directives on the WC hearing process, including the discovery process, how and when hearing should be scheduled and the manner in which they should be conducted, (2) it required that all hearings be recorded, and (3) it provided for an Alternative Dispute Resolution process.

Instituting Evidence-Based Medical Treatment Guidelines

This administrative rule adopted the first seven Chapters of the American College of Occupations and Environmental Medicine Practice Guidelines as the disability management philosophy for treatment in WC and adopted the Official Disability Guidelines Treatment in WC, 3rd Edition. Under the evidence-based medical treatment guidelines: (1) an injured worker could receive additional treatments or treatments not specified in the medical treatment guidelines if they are shown to be necessary and based on evidence-based medical treatment, (2) an employer or its insurance carrier cannot deny treatment that is based on these guidelines, and (3) in denying any treatment, the employer or its insurance carrier must disclose to the treating physician and employee the medically evidence-based criteria used as the basis of the objection.

5.4. The DLIR Internal Changes and New Initiatives

Although the DLIR WC system reform package and proposed changes in the administrative rules were rejected by the Legislature, the DLIR effort to improve the Hawaii's WC system continued.

First, the DLIR implemented several internal changes to improve the WC system in Hawaii. These include: (1) streamlining the WC hearing process, (2) improving the skills of DLIR hearing officers through training, (3) implementing a review process to ensure the decisions issued by the hearing officers are subject to review for consistency and fairness, and (4) initiating fundamental changes to the Hawaii Occupational Safety and Health (HIOSH)

branch of DLIR that improved the cooperation between HIOSH and business and safety communities in injury prevention. These internal changes have shown results in reducing WC costs (DLIR, 2007).

Second, the DLIR also introduced several new initiatives to improve the WC system in 2006. These include: (1) expediting hearing process for medical treatment disputes, (2) raising medical fee schedule to ensure adequate compensation for health care providers, (3) improving medical reporting forms, (4) providing objective standards in determining attorney fees, and (5) designing and implementing an on-line electronic filing system of all WC forms, as well as cost and insurance coverage reports from insurance carriers and medical reports from health care providers. It appears that these new initiatives are consistent with the operating goals of the WC system.

Third, in September 2006, the DLIR approved the Collectively Bargained Workers' Compensation Agreement (CBWCA) between the International Brotherhood of Electric Workers (IBEW) and the Electrical Contractors Association of Hawaii (ECAH). Under Section 386-3.5, HRS, private unions and their signatories are allowed to create their own WC system, so long as it does not provide less benefit than the law requires. However, it must be approved by the Director of DLIR. The CBWCA between IBEW and ECAH incorporated some of the measures promoted in the DLIR omnibus reform bills and the "nullified" administrative rules. These measures included:

- Creating and using a physician network of credible health care providers agreed upon by the labor union and the employers to provide prompt and quality medical care for the employees so they can return to work faster.
- Facilitating and expediting the claims process by utilizing alternative dispute resolution process.
- Involving both the employers and employees in the decision-making process, thereby easing adversarial relationships.
- Utilizing the Official Disability Guidelines' evidence-based treatment guidelines to ensure injured workers are provided with quality medical care based on medical evidence and enabling timely return to work.
- Amending workers' compensation law, including limiting an employer's ability to terminate benefits, authorizing the recovery of attorney's fees and costs by the injured

employee, specifying procedures for medical examinations by the employer's physician, establishing fines for violations, requiring the reporting of denials of claims and relevant information, and further restricting the director of labor and industrial relations' rulemaking authority (HB763, 2007).

5.5. The Recent Reform to California's WC System

To improve the WC system in California, its Legislature passed the Senate Bill (SB 899) and the Governor signed it into law on April 19, 2004. The SB 899 included the following major reforms: (1) introduced the medical provider networks (MPN), (2) introduced independent medical review (IMR), (3) introduced qualified medical examiner (QME) panels, and (4) created the permanent disability rating schedule (PDRS). These reforms seem to have achieved considerable success in reducing WC costs in California. According to the Workers' Compensation Insurance Rating Bureau of California, which tracks the actual average premium rates for insured employers, the average premium rates in California decreased 16 percent from \$6.35 per \$100 of wages in the last quarter of 2003 to \$5.34 per \$100 of wages in the third quarter of 2004 (California DWC, 2005). It should be noted that the SB 899 reforms focused mainly on controlling escalating medical costs, which accounted for 51 percent of total WC employee benefits in California in 2003. In Hawaii, the share of medical benefit in total WC benefits was about 40 percent at that year. The following is a detailed discussion of the WC reform in California under SB 899.

Medical Provider Networks (MPN)

An MPN is a group of medical service providers set up by an insurer or self-insured employer to treat workers injured on the job. Each MPN should be approved by the Administrative Director of the Division of Workers' Compensation (DWC) and must include a mix of doctors who specialize in treating work-related injuries and doctors with general areas of medical expertise. All MPNs are also required to meet specified standards to care for common occupational injuries and work-related illnesses. The MPNs must follow all medical treatment guidelines established by DWC and allow employees a choice of provider(s) in the network after the first visit.

Independent Medical Review (IMR)

Under an MPN, an injured employee has the opportunity to seek a second and third opinion from physicians within the MPN if the injured worker disputes the diagnosis or treatment offered by the treating physician. If the dispute is still not resolved, the injured worker may seek an independent medical review from a physician or independent medical review organization that has contract with the Administrative Director of DWC.

The IMR regulations established the criteria and process for contracting with individual physicians, and establishing a statewide list of eligible independent medical reviewers. After an in-person examination of the injured worker or review of the records, the independent medical reviewer must issue a report to the Administrative Director with analysis and determination whether the disputed diagnostic service(s) or medical treatment was consistent with the medical treatment utilization schedule adopted by the Director, or the American College of Occupational and Environmental Medicine (ACOEM) guidelines if the Administrative Director has not yet established a medical treatment utilization schedule.

If the independent medical reviewer agrees with the diagnostic service or medical treatment prescribed by the treating physician, the injured employee must be allowed to continue to receive medical treatment within the MPN. Otherwise, the injured worker can seek diagnostic service or medical treatment from a physician of his or her choice within or outside the MPN.

Since the medical service providers in the MPN are mostly selected by the insurers or self-insured employers, they may have a vested interest to minimize employer cost at the expense of the injured workers. The IMR regulations in California tend to reduce the negative impacts of the MPN on the injured workers. In addition, the application of the ACOEM guidelines provides objective standards to handle disputes.

Qualified Medical Examiner (QME) Panels

The qualified medical examiner (QME) panels are sought when parties involved in a claim have a dispute over permanent disability or other medical issues. Prior to passage of SB 899, only an unrepresented injured worker was allowed to seek a QME panel and only in cases where liability for the injury had been accepted. SB 899 allows claim adjusters to initiate a QME panel in cases where liability for the claim is in question. In addition, represented workers in disputes over permanent disability, other medical issues, or claim liability can also seek a QME

panel. This reform has resulted in a dramatic increase in the number of panels requested in California, which means that those with disputes are utilizing the process to resolve them.

Permanent Disability Rating Schedule (PDRS)

A worker's level of disability must be rated before permanent disability benefits can be paid. Before the reform, the schedule used in California to determine the level of disability was very subjective. SB 899 created a new system for determining percentage of permanent disability based on "the nature of the physical injury or disfigurement, the occupation of the injured employee, and his or her age at the time of such injury, consideration being given to an employee's diminished future earning capacity." The new PDRS makes rating more accurate by basing them on objective medical conditions and wage loss data, instead of subjective factors and work restrictions previously used to calculate a permanent disability rating.

Under the old system, two workers with the same type of injury could receive entirely different permanent disability ratings because there was so much subjectivity in the way impairment was evaluated, and in the way it was converted into a disability award. The old schedule also rewarded less serious work-related injuries with higher disability ratings based on over-reliance on subjective factors and work restrictions, resulting in disability ratings that did not accurately reflect the employee's disability and ability to return to work.

The new schedule aims to promote consistency, uniformity and objectivity by replacing subjective factors and work restrictions with objective medical evidence based on the American Medical Association (AMA) Guides, 5th Edition. Using the AMA Guides gives everyone the same methodology to determine impairment. Once an injured worker's impairment is objectively evaluated using the AMA Guides, three adjustment factors (diminished future earning capacity, occupation, and age) are applied to convert the impairment rating into a disability rating. All three adjustment factors are clearly laid out in the schedule and result in very similar disability ratings for similar types of injuries.

5.6. Conclusions and Policy Recommendations

Based on the available data and analyses provided above, the following conclusions and recommendations are provided.

1. The gap between WC employer cost paid and employee benefits received in Hawaii is significantly larger than for the U.S. as a whole. In addition, the gap in Hawaii has been increasing over time. Reducing this gap should be the focus of the WC system reform in Hawaii. The first step toward reducing the gap would be a more detailed analysis to identify the specific reasons for a low loss ratio in Hawaii. The legislative change proposed in House Bill 970 requires WC insurers to provide annual reports to the Director of DLIR. Since the DLIR does not regulate insurance rates, the annual reports should rather be provided to the Insurance Commissioner at DCCA. The annual reports should include, but not limited to, the costs of independent medical examinations, costs for legal services, and other administrative costs. Such annual reports together with the detailed revenue information of WC insurers will provide the much needed data to identify the reasons for the low loss ratio in Hawaii.
2. The low loss ratio seems to indicate that the WC insurance carriers in Hawaii are either more profitable and/or less efficient (with high management or administrative costs) than the nation as a whole. According to a study conducted by the Workers' Compensation Center, Michigan State University (Welch, 2007), Hawaii ranked the 4th highest in the U.S. in terms of the profitability of WC insurance carriers in 2005. The WC insurance carriers' return on net worth was estimated at 16.7 percent for Hawaii, as compared to 9.6 percent for the country. More detailed studies are needed to determine whether the low loss ratio is due to high profitability among WC insurers in Hawaii or due to other factors, such as increased administrative costs and increased reserves.
3. The enactments of Act 234 in 1995 and Act 261 in 1996 seems to have contributed to control the rapid increase in WC employee benefits in Hawaii since 1995.
4. On a per \$100 of covered wages basis, Hawaii's average total WC benefit level is higher than the national average, and this is partially due to relatively lower average wages in Hawaii. On a per covered worker basis, however, Hawaii's average total benefit is close to the national average, while Hawaii's average medical benefit is below the national average. The share of total temporary disability (TTD) in total benefit is found to be significantly higher in Hawaii compared to the nation. A detailed study is needed to determine as to why Hawaii's TTD share is so high.

5. The two administrative rule changes by DLIR, namely improving the WC hearing process by providing clear directives on the hearing process, and instituting evidence-based medical treatment guidelines by adopting Chapters of the American College of Occupational and Environmental Medicine Practice Guidelines and the Official Disability Guidelines) approved by the Governor in 2005, but later nullified by the Legislature, would have improved the WC system in Hawaii.
6. The DLIR internal changes and the new initiatives to improve the WC system in Hawaii should be supported because these changes are consistent with the operating goals of the WC system. Decreases in total WC costs in Hawaii since 2003 may be due to the DLIR internal changes and initiatives to improve the WC system.
7. Hawaii should consider establishing a labor-management advisory council to minimize the conflict between competitive parties in WC system and to include them in the policy-making process. The Wisconsin's advisory council might be used as a model for Hawaii. The advisory council should focus on the interests of both workers and their employers.
8. The recent reforms to California's WC system have achieved some success in reducing WC costs in that state. Many of the reforms adopted in California have already been adopted in Hawaii in the past but some measures, especially the measure to establish a more objective permanent disability rating schedule, should be considered. It appears that the WC cost can be decreased significantly by publishing a "Blue Book" in determining the "percentage" of PPD for unscheduled cases similar to the blue book used to estimate the value of a used car. With this blue book, the injured workers can estimate a reasonable benefit level based on their injuries. If the employer offers a reasonable "percentage" based on the blue book, the possibility of litigation may decrease, thereby reducing the cost of the WC system without reducing the benefit of the injured workers.

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