

# Compensable Injuries and Health Outcomes

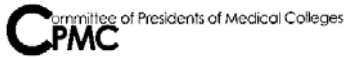


*The Australasian Faculty of Occupational Medicine  
The Royal Australasian College of Physicians,  
Health Policy Unit*



This publication has been compiled by The Australasian Faculty of Occupational Medicine and The Royal Australasian College of Physicians for use by members of the community and health professionals. The information and advice is based on current medical knowledge and practice as at the date of publication. It is intended as a general guide only and where relevant, not as a substitute for individual medical advice. The Royal Australasian College of Physicians and its employees accept no responsibility for any consequences arising from relying upon the information contained in this publication.

The Royal Australasian College of Physicians believes in open dialogue with the community to ensure sustainable solutions are found to the many challenges identified in the health sector. We acknowledge the involvement and support of the following organisations.



The Committee of Presidents of Medical Colleges (CPMC) is the unifying organisation of and a support structure for the participating Specialist Medical Colleges. The CPMC provides a forum within which to consider relevant issues including postgraduate medical training, standards and their maintenance, quality assurance, allocation of resources, and the medical workforce and provides authoritative advice, information and opinion to other professional organisations and to Government.



NRMA Insurance Ltd is Australia's largest general insurer and a leading manager of personal injury claims, with compulsory third party and/or workers' compensation operations in all Australian states and territories. The company has demonstrated a strong commitment to best practice in managing injury claims through early intervention and a clear focus on achieving optimal health outcomes.

[www.nrma.com.au](http://www.nrma.com.au)



The MAA is a statutory corporation that monitors and supervises the NSW Motor Accidents Scheme. It was established by the Parliament of NSW under the *Motor Accidents Act 1988* on 10 March 1989. The Motor Accidents Scheme is the Compulsory Third Party (CTP) personal injury insurance scheme for motor vehicles registered in NSW.

[www.maa.nsw.gov.au](http://www.maa.nsw.gov.au)



WorkCover New South Wales manages the State's workplace safety, injury management and workers' compensation systems. WorkCover New South Wales is responsible for ensuring compliance with workers' compensation and occupational health and safety legislation.

[www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au)

© The Royal Australasian College of Physicians

Published by The Royal Australasian College of Physicians, Sydney 2001

Document and Supporting papers available from <http://www.racp.edu.au/afom>

Printed copies available from:

The Australasian Faculty of Occupational Medicine  
The Royal Australasian College of Physicians  
145 Macquarie Street,  
Sydney NSW 2000

Tel: (02) 9256 5444 Fax: (02) 9252 3310

ISBN 0-909783-48-9

# Compensable Injuries and Health Outcomes

## Table of contents

---

<b>Executive Summary</b>	<b>2</b>
<b>Recommendations</b>	<b>3</b>
<b>Summary of causes of poorer health outcomes</b>	<b>4</b>
<b>What is needed in order to improve health outcomes?</b>	<b>5</b>
<b>Areas identified for future research</b>	<b>6</b>
<b>Background to this report</b>	<b>7</b>
<b>Methodology</b>	<b>8</b>
<b>Literature Review: Results</b>	<b>9</b>
<b>Literature Review: Discussion</b>	<b>19</b>
<b>Interviews and Seminar: Opinions from Stakeholders</b>	<b>22</b>
<b>Table 1: Medico-Legal Effects on Illness in Claimants: Problem Points</b>	<b>23</b>
<b>Identified Issues and Suggestions for Improvements: Seminar</b>	<b>28</b>
<b>Bibliography</b>	<b>37</b>

# Executive Summary

---

The Committee of Presidents of Medical Colleges, through the participation of The Australasian Faculty of Occupational Medicine of The Royal Australasian College of Physicians, undertook a research project aimed at identifying whether people with compensable injuries have poorer health outcomes than those with similar but non-compensable injuries should be expected, and if so, why. This included a literature review, interviews with stakeholders in the compensation process, and a multi-disciplinary seminar held on 6th October, 2000, in Sydney.

## Main issue

There is good evidence to suggest that people who are injured and claim compensation for that injury have poorer health outcomes than people who suffer similar injuries but are not involved in the compensation process.

## Summary

Although most people who have compensable injuries recover well, a greater percentage of these people have poorer health outcomes than do those with similar but non-compensable injuries. There is sufficient good quality evidence to show this to be true, and significant agreement among practitioners in all relevant fields (medical, legal, insurance, government oversight bodies) to support the evidence and to suggest that a complex interaction of factors is responsible for this.

However, research into causes of poor health outcomes for these people is fragmentary and inconclusive.

Not enough is known of the effects of different types of compensation schemes or different methods of management of cases (by all practitioners involved) to allow the development of a 'best practice' model.

Any attempt to 'reform' the compensation system(s) must be informed by further rigorous research.

However, the research does clearly indicate the importance of psychosocial factors in long-term disability and recent evidence suggests that appropriate early medical intervention that takes this into account can significantly reduce chronicity and long-term disability. Such intervention should ideally be a co-ordinated interdisciplinary effort (for example, medical, psychological and physiotherapy) to provide interventions that address as many levels of the case as possible.

It is also generally agreed amongst representatives from the medical colleges that the quality of management of the most common types of compensable injuries (non-specific low back pain, 'whiplash' and other soft tissue injuries) should be improved.

Amongst the legal fraternity involved with the civil justice system, a great deal of reform and consideration of reform is currently underway. This is an international movement. Some of the areas of consideration include the management of expert testimony, more active case management by judges and the effect of the adversarial system in civil matters.

Practitioners in all fields are concerned about the ill effects experienced by their clients. Co-operation between professions is crucial to the development and implementation of workable solutions to the problems outlined in this report.

Since the seminar, participants have been given the opportunity to comment on a draft of this report. Organisations represented have overwhelmingly reiterated their willingness to contribute to further work on this problem. This enthusiasm and commitment should not be wasted. The establishment of an on-going multi-disciplinary group that can take action on the recommendations is a priority.

# Recommendations

---

In the final session of the seminar, it was agreed that on-going dialogue and information-sharing between representatives bodies be established, to be co-ordinated through The Australasian Faculty of Occupational Medicine for the Committee of Presidents of Medical Colleges (CPMC).

The following bodies indicated interest in continuing to be involved: WorkCover NSW, NRMA, Australian Plaintiff Lawyers Association, the Bar Association, College members of the CPMC, The Australasian Faculty of Musculo-skeletal Medicine, the Australian Psychological Society, the Motor Accidents Authority of NSW, the Australian Physiotherapists Association, the Department of Veterans' Affairs, the Department of Family & Community Services and the Insurance Council of Australia.

There were areas for further actions agreed upon at the seminar. These have been couched here as recommendations.

## 1. Consumer issues

Develop a consumer information strategy. This should take into account:

- ◆ the potential to deliver better information to claimants or potential claimants at an early stage via the insurance processes and/or medical and health providers
- ◆ the emerging trend of developing consumer materials to complement clinical guidelines
- ◆ information for consumers based on research on financial outcomes of compensation cases to ensure expectations are realistic
- ◆ opportunities to explore exchange of information between experienced, and often disillusioned claimants, and new claimants.

## 2. Medical education

Develop a medical education strategy for undergraduates and practitioners, particularly GPs. This should have as its focus:

- ◆ the compensation system - the medical role in the process and potential negative effects on health outcomes
- ◆ best practice treatment for commonly occurring conditions.

## 3. Medical assessment

- ◆ Develop/adopt national guidelines for assessment of impairment and disability.
- ◆ In recognition of the fact that those guidelines currently available are less than perfect and depend on consensus views rather than a scientific basis, research should be undertaken to progressively improve the quality of the guidelines.

## 4. Medical testimony

- ◆ Review international guidelines on the use of medical evidence, for example, from the USA, with a view to improving current Australian guidelines.
- ◆ Recognise that the understanding of medical evidence in medicine and law are very different. Create a multi-disciplinary forum for on-going dialogue on this subject.

## 5. Areas for future research

Develop a research strategy with the aims of:

- ◆ identifying key features of compensation design which are likely to impact on health outcomes
- ◆ determining impacts on health outcomes
- ◆ developing options for scheme design that optimise health outcomes and are cost effective.

# Summary of causes of poorer health outcomes

---

There are a number of potential causes. Below are listed the factors which may contribute to poorer health outcomes.

The factors that are fully or partly implicated in the literature are:

- ◆ The psychosocial environment of the injured person at the time of injury (for example, low job satisfaction, poor social networks, lack of purposeful use of time). This includes societal attitudes towards injury and compensation
- ◆ The psychosocial environment of the injured person after the time of injury (for example, a workplace not prepared to adapt to a return to work program, family members unsupportive of rehabilitation programs)
- ◆ The psychological vulnerability of the injured person (this will be affected by pain and by psychosocial factors)
- ◆ The initial response to claimants by insurers (for example, acting as though claimants are automatically assumed to be fraudulent, thus pushing them into a defensive 'I'll show them I'm really sick' attitude)
- ◆ The management of initial treatment (for example, in non-specific musculo-skeletal injuries, not identifying psychosocial risk factors ['yellow flags'], not encouraging resumption of normal behaviours as far as possible, not encouraging return to work or normal activities, etc.)
- ◆ The handling of case management by insurers (for example, not developing appropriate return to work programs nor monitoring these, not providing claimants with good information about the effects of long term sick leave, etc.)
- ◆ The handling of case management by treating doctors, including specialists (for example, not reviewing treatment by service providers and continuing treatment which is not helping, providing unnecessary treatment, not giving early referral to pain management programs, not addressing psychological problems such as depression, etc.)
- ◆ The number and type of medical examinations required by the insurers and by the claimant's lawyers. The effect of these appears to be twofold: to entrench illness behaviours and to prejudice the claimant further against the insurance company.
- ◆ The length of time away from work. Unemployment is, in itself, a risk factor for poor health. There are multiple and interrelating effects of being away from work, including loss of sense of identity, loss of social networks, loss of economic control and independence, loss of social status, loss of financial security (such as loss of the family home), and so on. Long-term unemployment is notoriously hard to break. (Where unemployment is caused by injury, this is exacerbated by employer's reluctance to employ anyone with pre-existing injuries because of risk to workers' compensation premiums and the perceived risk of re-injury.)

The factors that have been identified through interviews or discussions with stakeholders but have not been formally tested are:

- ◆ The adversarial system of managing compensation cases, which encourages parties to take up fixed opposing positions and creates a climate where getting a result in the court case becomes the goal of both parties, rather than fully rehabilitating the injured person
- ◆ Encouragement from some plaintiffs' lawyers to remain inactive in order to ensure the highest possible settlement
- ◆ The length of time between injury and settlement. In one study, 29 months was the average time to settlement. While some legislation requires that the injury be 'stabilised' before settlement, stakeholders suggest that cases are often 'dragged out' unnecessarily, particularly by insurers' lawyers. Ordinary delays in the court system are also a problem
- ◆ The sense of powerlessness engendered by being caught up in 'the system'; having no control (except by dropping the claim) over when or how there will be a resolution, no control over decisions made about the claim, no control over number and content of medical examinations, etc.
- ◆ The type of compensation offered; systems with no or limited compensation for pain and suffering may produce better outcomes. (Why this is so has not been fully explored. Many of the points listed above may be relevant.)

The complexity of these lists makes it clear that there is no single, easily isolated cause of poorer health outcomes for compensable cases. Some of the factors that may affect outcomes have been identified by research, but it is very likely that it is a complex interaction of these factors that lead to poor health. Further research is needed to identify which of these factors, or the interaction of which factors, is most important in determining health outcomes.

# What is needed in order to improve health outcomes?

---

The following needs were identified at the seminar and have been grouped under the following headings:

## Consumers

- ◆ information for consumers.

## Medical Profession

- ◆ treatment based on evidence based medicine (EBM)
- ◆ improvements in medical case managements by treating doctors (tied to education)
- ◆ recognition of the importance of psychosocial factors in treatment, assessment and case management of injured persons
- ◆ improvement in management of people at high risk of developing long term disability, especially in helping them to return to normal activities
- ◆ improvement in management of people with chronic pain, so that where 'red flag' conditions have been excluded, these people are helped to resume more normal activities despite their pain
- ◆ improvement in assessment process to make it simpler and clearer for both assessors and patients
- ◆ assessors and treating doctors should be differentiated, with assessors being trained and accredited in impairment/disability assessments. Accreditation necessary for an assessor to appear as an expert witness
- ◆ development of nationally accepted assessment and treatment guidelines for all relevant conditions
- ◆ education based on EBM for undergraduates, treating doctors and other relevant health care providers in appropriate treatment and case management of typical compensation cases (musculo-skeletal and pain medicine)
- ◆ education courses must have incentives to encourage participants to attend.

## Legal

- ◆ revision of Federal Court guidelines on the use of expert witnesses and adoption by all jurisdictions. Guidelines to emphasise testimony based on accepted scientific standards of evidence
- ◆ education of judges in medical testimony, particularly in what constitutes evidence in the scientific model.

## Insurers

- ◆ systemic change to include: revision of incentives to encourage recovery and return to work or normal activity. This change to occur at both insurer system level and post-dispute
- ◆ development of case management processes so that insurers can identify at risk individuals and refer them for early intervention via appropriate medical management. This would include performance standards for insurers, doctors and rehabilitation providers, with performance indicators including claimant health outcome measures.
- ◆ improvement of alternative dispute resolution processes, both within insurance companies and through the courts.

## Multi-disciplinary interactions

- ◆ continuing stakeholder interaction and information sharing
- ◆ improved communication between stakeholders/players (i.e. injured person, doctors, insurers, lawyers, employers)
- ◆ training for both lawyers and doctors including roles and duties, process and evidential standards
- ◆ ongoing high level dialogue between representative medical and legal bodies and relevant Government authorities
- ◆ clarification amongst stakeholders of terms such as 'pain', 'impairment' and 'disability'.

# Areas identified for future research

---

## Literature review

While there is an accumulation of data that patients with compensable injuries have poorer outcomes than those with non-compensable injuries, there is little data on why this is so.

The most surprising result of the literature review was that, considering the cost to individuals, organisations and governments of compensation schemes, so little research had been done into their effects.

For example, within medico-legal systems, did different systems have different effects? Were there, for example, differences in outcomes for workers' compensation claimants vs CTP claimants? Did different types of conditions have different outcomes?

There are no studies that directly examine the role of insurance company procedures in health outcomes - for example, do outcomes vary between those whose claims are disputed and those whose claims are not disputed?

These issues remain, to a great extent, unexamined. While there are some studies that address small aspects of these questions, none of them can be answered with any degree of certainty.

## Interviews and seminar

The following research questions for which there are no reliable answers, were raised in the interviews and seminar:

Have rates in assignment of permanent disability risen?

What percentage of cases involve chronic pain from non-specific musculo-skeletal causes (e.g. whiplash, Non Specific Low Back Pain [NSLBP])?

Can we determine the best option for consumer health, by comparison of existing compensation schemes and their outcomes?

What gaps exist in evidence based medicine regarding treatment of certain injuries?

Which alternative dispute resolution (ADR) or mediation approaches work best for compensation matters?

What are effective early intervention measures for at risk claimants?

What percentage of cases are settled before their 'day in court' and when are settlements usually reached?

Given the importance of psychosocial factors in neck and back pain, what factors are perceived by claimants to have most contributed to stress during the claims process?

**There is clearly a need for significant research to be undertaken in this area before any large-scale reform can be contemplated.**



# Background to this report

---

In February of 1999, an editorial entitled *Disability and work-related injury: time for a change?* was published in the *Medical Journal of Australia* (Molloy *et al*, 1999). Its three authors, all involved with The University of Sydney Pain Management and Research Centre, raised the issue of increasing rates of assignment of permanent disability associated with workplace injury. They pointed to work, such as the International Association for the Study of Pain's report on non-specific back pain (IASP, 1996), which supports 'the conceptualisation of pain as a complex multi-dimensional experience comprising physical, psychological and environmental factors' which may be modifiable - that is, not a permanent disability.

**The authors suggested that '...there has been an excessive focus on medical factors at the expense of psychosocial considerations, leading to the medicalisation of suffering'.**

This paper struck a chord with many occupational physicians. The Australasian Faculty of Occupational Medicine (AFOM), part of The Royal Australasian College of Physicians, was receiving feedback from its members that indicated that many were concerned about the management of compensable injuries. Anecdotally, it seemed that people with compensable injuries had poorer health outcomes than those who had similar but non-compensable injuries. This concern dovetailed with the concerns about medicalisation and the use of 'minimally effective treatments' raised by Molloy *et al*.

The Faculty decided that this issue was important enough to examine further, and brought the matter to the attention of the Committee of Presidents of Medical Colleges (CPMC), which decided to support research and discussion into the topic.

AFOM sought and received sponsorship from the Motor Accidents Authority, the NRMA and WorkCover NSW to run a multi-disciplinary seminar on the issue, and to subsequently publish this report.

Initially, the seminar was to look at the assignment of permanent disability. However, during the research phase it became clear that the main focus of concern was the poor health outcomes achieved by those with compensable injuries, and the seminar focus was altered to reflect this.

From the beginning, it was recognised that a person with a compensable injury is at the centre of a complex interaction between medical, legal, industrial and social systems. To address this, five experts representing different aspects of this interaction were asked to present papers at the seminar. The aim of the papers was to identify the major issues from each perspective:

- ◆ consumers
- ◆ doctors
- ◆ lawyers
- ◆ insurers, both government and private.

These perspectives papers are available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

In addition, a research officer was contracted to undertake a literature review, to interview stakeholders and to prepare a discussion paper that gave an overview of the issues, bringing together all perspectives and analysing the evidence available about causes and solutions.

The seminar was held on October 6, 2000 at the National Maritime Museum, Darling Harbour, Sydney. All stakeholder groups were represented. A list of participants is available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

The seminar, in addition to the presentation of papers, involved participants suggesting solutions and recommendations for some of the issues presented.

This report presents the results of the literature review, the interviews with stakeholders and the views and conclusions put forward at the seminar. It also suggests further action to be taken.

# Methodology

---

The following databases were searched:

- ◆ ABI Inform
- ◆ AGIS
- ◆ Australian Public Affairs Index Service (APAIS)
- ◆ PQDWeb
- ◆ PubMed (National Library of Medicine)
- ◆ Ovid on-line
- ◆ Social Sciences Index
- ◆ WebSPIRS

Keywords (and combinations of these keywords) used were:

- ◆ adversarial system
- ◆ compensation
- ◆ compensation neurosis
- ◆ compensable injuries
- ◆ disability
- ◆ disability evaluation
- ◆ expert evidence
- ◆ expert testimony
- ◆ expert witness
- ◆ guides/guidelines
- ◆ legal reform
- ◆ medical assessment
- ◆ medico-legal
- ◆ permanent impairment
- ◆ permanent disability.

In addition, references were obtained from stakeholders, including specialist doctors who recommended key texts in their area of speciality that related to these topics.

After culling, 53 strongly relevant articles and 12 other publications were identified (see Bibliography). On-line research was added to these, particularly on web sites of government instrumentalities concerned with statutory insurance schemes. These included:

- ◆ Insurance Commission of WA
- ◆ Motor Accidents Authority of NSW
- ◆ Motor Accidents Commission of SA
- ◆ Motor Accidents Insurance Board of Tasmania
- ◆ Traffic Accidents Commission of Victoria
- ◆ Review of CTP scheme in Queensland
- ◆ WorkCover in all States
- ◆ Accident Compensation Corporation of New Zealand.

Internet searches were also performed upon the following terms (Alta vista and Compuserve search engines):

- ◆ motor accidents commission
- ◆ compulsory third party insurance
- ◆ compensation and disability
- ◆ workers' compensation.

# Literature Review: Results

---

The literature review sought to answer the following questions:

- ◆ Was there evidence that people with compensable injuries had poorer health outcomes than those with non-compensable injuries?
- ◆ If so, what might be the cause(s)? What influences on these people produced negative effects? Was there a simple causation or were there more complex, perhaps synergistic, effects occurring?
- ◆ Were there solutions to these problems currently being used elsewhere, for example, models or systems that might be used effectively in the Australian environment? Was there a way to improve outcomes for patients?

The search for information on solutions was informed by advice from interviewees.

The term 'health outcomes' is used in this report in its broadest sense. Depending on the study cited, it may include functional capacity, return to work, return to prior activities, subjective perceptions of pain, depression, ability to function compared to the past, etc.

Where the term 'evidence' is used in this literature review relating to medical studies, it is used in the scientific sense, and is assessed using established scientific methodology. (The National Health and Medical Research Council rating scale, for example, which grades evidence from Grade I to Grade IV, where Grade I is evidence obtained from a systematic review of all relevant randomised controlled trials, Grade II is evidence obtained from at least one properly designed randomised controlled trial, Grade III includes evidence from well-designed pseudo-randomised controlled trials and from comparative studies and Grade IV, evidence from a case series.)

## Compensable vs non-compensable injuries

Several studies have attempted to test the hypothesis that patients with compensable injuries have poorer health outcomes than those whose injuries are not compensable.

The studies have looked at different injury types (abdominal hernia, whiplash, non-specific low back pain [NSLBP], herniated lumbar disc) and different insurance schemes (predominantly workers' compensation and motor vehicle third party insurance).

Although many of the studies have methodological problems, particularly in the selection of the study population, the accumulation of evidence suggests that compensation is associated with poorer health outcomes.

Perhaps the most provocative study of all was by Schrader *et al* in 1996. This study looked at the incidence of whiplash in Lithuania, a country where few car drivers or passengers are covered by insurance and '...there is little awareness among the general public about the potentially disabling consequences of a whiplash injury'. Although this and other statements about public and medical awareness of the whiplash syndrome are unsupported in the paper, Schrader *et al* were nevertheless studying a virtually compensation-free environment. In a retrospective questionnaire-based cohort study, 202 individuals, identified from traffic police records, were interviewed one to three years after experiencing a rear-end car collision. Neck pain, headache, subjective cognitive dysfunction, psychological disorders and low back pain in this group were compared with the same complaints in a sex-matched and age-matched control group of uninjured individuals.

The study found no significant difference between the two groups regarding symptoms. The most important risk factor identified was a family history of neck pain. The authors conclude, '...expectation of disability, a family history, and attribution of pre-existing symptoms to the trauma may be more important determinants for the evolution of late whiplash syndrome'.

The authors do not discuss the effect of incentives within the insurance scheme; nor do they consider the effect of the process itself (with its requirement for the claimant to continually display symptoms in order to be compensated).

In April 2000, a paper was published in the *New England Journal of Medicine* that considered these issues.

Cassidy *et al* looked at the effect of a change in the third party insurance scheme that operates in the Saskatchewan Province of Canada. On January 1, 1995, the province's tort system for compensation was changed to a no-fault system. Claimants could no longer sue for pain and suffering, but medical and income-replacement benefits were increased.

Tort action was still possible under the no-fault system if costs exceeded the benefits available (that is, if medical costs exceeded \$500,000 or if the annual income-replacement claim exceeded \$50 000). Saskatchewan has a universal health care system with no cost to the patient for treatment.

The study looked only at claimants with whiplash injuries. It compared claimants in the last six months of the old system with those in the first year of the new system. The rate of claims dropped 28% under the new system. The median duration of claims also decreased by more than 200 days (that is, the time between injury date and closure of the claims file). The authors used this duration as a measure of recovery time. Although this measure has received criticism, the authors report a '...strong and consistent association between the time to closure of claims and indicators of recovery from injury (reported pain, level of physical functioning and level of depression)'.

This suggests that, not only do people put in fewer claims under a no-fault system, but also they get better faster. The authors conclude: the ‘...elimination of compensation for pain and suffering is associated with a decreased incidence and improved prognosis of whiplash injury.’

Cassidy also reported that the involvement of a lawyer in a case was associated with a delay in case closure (and thus, he would argue, to recovery time). Not only lawyers were adversely mentioned, however. Those claimants who did not seek medical attention at the time of the injury and those who sought it from their physician only closed their claims faster than those who initially saw a physical therapist or chiropractor.

This result is congruent with Spitzer *et al*'s recommendations of minimal intervention in whiplash cases.

The Cassidy *et al* study has been criticised for using the case closure time as a measure of recovery (and he has received strong criticism from professional legal associations such as the Association of Trial Lawyers of America and the Law Society of Saskatchewan - see National Law Journal, May 22, 2000). Yet other studies seem to support their contention.

Most recently, Atlas *et al* (2000) conducted a prospective observational study of workers' compensation back pain cases and found similar results in terms of pain experienced and quality of life.

This study looked at patients who had sciatica from herniated lumbar disc and were seeking care from specialist physicians in community-based practices throughout Maine. Out of 440 eligible patients, 199 were receiving workers' compensation. A follow-up at four years assessed outcomes including disability compensation and work status as well as relief from symptoms, functional status and quality of life.

There were several interesting results from this study. Patients receiving workers' compensation reported worse functional status than the other patients, yet had similar clinical findings. Patients who had been receiving workers' compensation at baseline were more likely to be receiving disability benefits at the time of follow-up but were only slightly less likely to be working. Matching Cassidy's results, patients who had been receiving workers' compensation at baseline had significantly less relief from symptoms and improvement in quality of life.

However, most patients (regardless of their compensable status) returned to work. Although outcomes with regard to disability and work status were similar for those treated operatively and those treated non-operatively, patients who had been managed with an operation reported greater relief from symptoms and improvement in functional status at follow-up.

Atlas *et al* are not the only researchers to find that compensable patients reported worse outcomes than others, despite similar clinical results. Salcedo-Wasicek and Thirlby, who compared the recovery after inguinal herniorrhaphy of patients receiving workers' compensation to those with commercial health insurance, found that workers' compensation patients reported longer duration of post-operative pain and more days off work.

While the selection of the cohort and the matching of the control group to the cohort in this study raised questions of validity, the results are congruent with those of other studies.

Similarly, Rainville *et al* (1997) found that patients seeking or receiving compensation for chronic low back pain reported more pain, depression and disability than a matched group without compensation involvement. Treatment recommendations and compliance were not affected by compensation status. This study looked at patients involved in a rehabilitation program. The two groups were similar in length of treatment, flexibility, strength, lifting ability, and lower extremity work performance before and after treatment. Patient satisfaction ratings were also similar. However, follow-up (3, 6 and 12 months) showed that patients with compensable injuries were more depressed and disabled and at the 12 month follow-up, had not improved in their perception of pain, unlike the non-compensated patients.

While the pattern of compensated patients having poorer health outcomes appears to be common across soft tissue injury types (at the very least – the researcher found no similar studies available on catastrophic injuries or industrial diseases), there has been little attempt by researchers to ‘dig down a layer’ and ask ‘Why?’

One study, however, suggests that it is not merely the fact of compensation, but the type of compensation and the manner in which it is provided, which has an effect on health.

Greenough and Fraser (1989) reviewed 150 patients with compensable injuries and 150 patients with non-compensable injuries between one and five years from presentation. The compensable patients came from both workers' compensation and third party schemes. The incidence of reported pain, disability, psychological disturbance, unemployment and length of time off work was greater in the compensation group. Settlement of the claim did not result in any reduction in morbidity, even up to five years later.

Patients claiming a lump sum appeared much worse off than those on intermittent payments only (there was no difference between types of insurance in this). These patients were more likely to be involved in a dispute. Of these patients, 50 per cent said they would not go through the claims process again under similar circumstances. ‘The reasons given were: the process had been too stressful, too slow, it had caused too much family trauma, or appeared to reduce the treatment that they were given, they had become depressed, or were unable subsequently to find a job’.

It is interesting that some of Greenough and Fraser's subjects believed being a compensated patient reduced the treatment they were given. At least one study has appeared to find the opposite. Taylor *et al* (1996) found that, in Washington state, patients covered by workers' compensation were 1.37 times more likely to undergo surgery involving fusion, and almost twice as likely to have a subsequent re-operation within three years of the index surgery.

The study did not investigate possible causes of this.

Turk and Okifuji (1996) also found that chronic pain patients who were receiving or seeking compensation reported more severe pain, greater disability, higher levels of emotional distress and greater life interference, despite comparable degrees of physical findings.

However, Turk and Okifuji (1996) also found that, among patients with non-compensable injuries, '...patients who attributed their pain to a specific trauma reported significantly higher levels of emotional distress, life interference, and higher levels of pain severity than did the patients who indicated that their pain had an insidious or spontaneous onset, regardless of the extent of objective physical findings.' This paralleled the levels reported by patients with compensable injuries.

There are, moreover, some studies that show little or no difference between patients with compensable injuries and patients with non-compensable injuries, such as Mayou (1995) and McKinley *et al* (1983). Both these studies looked at accident-related injuries (whiplash/multiple injuries and head injuries respectively).

### **Incentives to illness behaviour**

If compensation is associated with poorer health outcomes, are the outcomes different when financial incentives in insurance schemes change? Cassidy *et al*'s study suggests that they are.

McNaughton *et al* (2000) looked at 100 consecutive back pain claimants under the New Zealand no-fault 24-hour compensation scheme. Under this scheme, any accident victim can claim compensation such as income replacement and medical costs, no matter where or how the accident occurred. This study, like Cassidy *et al*, used case closure as measure of recovery. It found that the variable most closely associated with case non-closure was whether the claimant was receiving earnings-related compensation (equal to 80% of previous income). The authors conclude that the New Zealand scheme was associated with adverse outcomes for people with back pain; that it may '...discourage return to work for people with back pain'; and that physicians and patients may be more likely to attribute back pain to 'an accident' under a no-fault 24-hour system.

Because this study looked only at insurance records, no data existed on claimants' perceptions of pain, physical functioning or quality of life.

Binder and Rohling (1996) conducted a meta-analysis of 18 study groups (a total of 2353 subjects with closed head injury). They found that the data showed more abnormality and disability in patients with financial incentives despite less severe injuries and concluded '...clinical evaluation of patients after closed-head injury, particularly mild head trauma, must include consideration of the effect of financial incentives on symptoms and disability.' Hirsch (1997) looks at this phenomenon from an economic theory perspective and notes that rates of claim are lower in workers with greater education, earnings and age. He attributes this to the greater opportunity cost of missing work for these workers, and notes that 'skilled workers also tend to take some of the higher potential compensation in the form of a safer work environment, hence lowering injury rates.' Hirsch acknowledges that the rate of claim varies depending on a number of factors (union status, gender, race, marital status, part-time status) that are not necessarily financially linked.

These studies assume that the financial incentive of compensation is a cause of poorer health outcomes, rather than the health outcomes being caused by the process of claiming the compensation. Hadler (1996) disagrees. 'The process demands that the injured litigant demonstrate the magnitude of illness to whomever sits in judgment of the validity of the demonstration...The litigant is likely to lose the prerequisite skills for well-being, the abilities to discern among the morbidities, and to cope. The litigant is likely to embody the perspective and language of the diagnostic algorithm. Inexorably, the litigant is drawn into the vulnerable state, too often never to return.'

Here, while the financial incentive may be the cause of the person entering litigation, the effect is caused because, in Hadler's words, '...if you have to prove you are ill, you can't get well'. This is a subtle distinction, perhaps, but holds more hope for developing solutions.

Other, even more subtle effects may be operating.

The findings of Turk and Okifuji (1996) regarding non-compensable patients, discussed above, suggest the effect may be the result of the type of onset (that is, accident or injury). They conclude: a '...competing hypothesis [to the financial incentives theory] is that patients' maladaptive beliefs and elevated attention to bodily sensations associated with traumatic onset, rather than a financial inducement, may account from the differences between compensated and non-compensated chronic pain patients.'

Mayou (1996) also suggests that the anger of the injured person may play an underestimated role in influencing attitudes to the pursuit of compensation; '...it is often focused on the lack of concern or apology by those believed to be responsible rather than on gaining maximum financial reward.' He cites research into medical malpractice suits (La Rae *et al*, 1994). Mayou's earlier paper, a

prospective study of 96 subjects who pursued compensation claims, found that public recognition of suffering and innocence appeared to be important motives for claims, and that there was little evidence of pursuit of claims for maximum financial gain.

## The psychological effects of compensation

There is a substantial body of literature looking at ‘compensation neurosis’ or ‘accident neurosis’. It was postulated in the 1950s and 1960s that the experience of claiming for a compensable injury induced particular psychological reactions in claimants, but that these were motivated by hopes of financial and other rewards, and showed considerable improvement after settlement (for example, Miller, 1961). There was a strong implication of, if not outright lying, at least substantial exaggeration in patients’ reporting of their pain and distress.

According to Mayou (1996), this view is no longer accepted within psychiatry, although ‘...remaining influential with doctors and with lawyers...’. Mayou notes that following any major physical illness, a quarter or a third of people describe distress and disability that is significantly greater than usual. He suggests this is determined more by individual vulnerability factors than by the nature of the disorder and that psychological reactions, including perception of pain, are ‘...substantially determined by the reactions of other people...’, including doctors. Hadler (1996) would agree.

In a similar vein, the IASP (1995) recommended that non-specific lower back pain be treated as a biopsychosocial problem, rather than a biomedical one. Cohen *et al* (2000), in a study of Australian workers’ compensation claimants with low back or neck/arm injury, found that abnormal psychosocial factors were ‘...identified or acted on only rarely by the treating clinicians, despite their evident presence’. Those still experiencing pain (69.47% of subjects) had a ‘high prevalence of depressed mood’ as measured by the Beck Depression Inventory, reaching clinical significance in those who were not working.

Most recently, Linton (2000) has conducted a review of 37 prospective studies on the psychological factors in neck and back pain. This research showed a clear link between psychological variables and neck and back pain. Psychological variables were related to the onset of pain, and to acute, subacute and chronic pain. Stress, distress or anxiety, as well as mood and emotions, cognitive functioning and pain behaviour were all found to be significant factors. Personality factors produced mixed results and there was some evidence that abuse was also a potentially significant factor. The author concludes that psychological factors play a significant role in both acute and chronic pain, particularly in the transition to chronic problems. ‘Specific types of psychological variables emerge and may be important in distinct developmental time frames...’ with implications for assessment and intervention.

Linton and Andersson (2000) have applied these results to some effect. In a randomised controlled study superimposed on treatment as usual, they compared the ability of three interventions to prevent long-term disability in patients with spinal pain. Three groups were given different interventions:

- ◆ a pamphlet shown earlier to have an effect
- ◆ a more extensive six-installment information package
- ◆ a six-session cognitive behaviour group intervention.

All three groups showed benefits immediately and at the one-year follow-up. ‘However, the risk for a long-term sick absence developing was lowered ninefold for the cognitive behaviour intervention group as compared with the risk for the information groups.’ This group also showed a significant decrease in physician and physical therapy use compared to the other two groups, in which such use increased.

Psychosocial factors are increasingly becoming a factor in assessment and treatment (see below, discussion of the New Zealand approach to low back pain). See below, the social determinants of health.

## Treatment of common compensable injuries

Cohen *et al* (2000) examined the process and outcome of medical assessment and management of 95 workers who had sustained a low back or neck/arm injury in the course of their work. In physical examinations of 75 of these subjects, they found a low concordance rate between the probable retrospective diagnosis and the file diagnosis in those subjects still experiencing pain up to two years post-injury, suggesting a problem with diagnosis. However, there was no difference in medical status between those with pain who were working and those with pain who were not, except that the latter group had undergone more surgery. They also found patterns of inappropriate referrals to specialist doctors and inappropriate prescription of non-steroidal anti-inflammatory and anti-anxiety drugs. Although, as discussed above, depressed mood was present in the majority of subjects with pain, relatively few had received antidepressant medication or received appropriate psychological therapy. This study had a low rate of participation (31% of contacted subjects) but there was strong similarity in demographic profile and return-to-work patterns between participating subjects and the total sample.

Other studies either suggest that inappropriate treatment is common (see Cassidy 2000, for example, where treatment for whiplash by physiotherapists and chiropractors was associated with much longer recovery times) or that compensable patients receive different treatment to others (Taylor *et al* 1996).

Generally, the focus of criticism is in the treatment of soft tissue injuries (neck, back, shoulder, knee); that is, musculo-skeletal injuries. Where there are identifiable specific anatomical or neurophysiological causative factors, treatment is not often criticised.

The New Zealand Accident Rehabilitation and Compensation Insurance Corporation (now the Accident Compensation Corporation) has produced a number of resources aimed at treating doctors in an effort to improve initial treatment of low back pain and to identify those patients at risk of developing chronic conditions. These resources include the New Zealand Acute Low Back Pain Guide and Guide to Assessing Psychosocial Yellow Flags in Acute Low Back Pain.

The second guide, the most relevant for our subject group, aims to:

- ◆ provide a method of screening for psychosocial factors
- ◆ provide a systematic approach to assessing psychosocial factors
- ◆ suggest strategies for better management of those with acute low back pain who have 'Yellow Flags' indicating increased risks of chronicity.

The Guide provides a screening questionnaire as well as information for practitioners. Production of these resources was prompted by a '...steady rise in the number of people who leave the work force with back pain.' (p. 2) and is based on the hope that secondary prevention of chronic disability, rather than chronic pain, is possible at the primary care stage. The approach in this Guide is informed by the IASP guidelines on the management of low back pain (IASP 1996).

The State of Victoria has implemented guidelines for medical practitioners, has run a series of educational sessions on low back pain for primary care practitioners, and has run a major public health campaign to reduce disability from back pain from 1997-2000. This has been evaluated through a research project assessing general practitioner beliefs and standards of management, community attitudes and beliefs regarding back pain, and outcomes from the compensation system data. Results of this evaluation demonstrate that patient and general practitioner attitudes have been altered by the campaign and results of effects on work loss and medical costs are awaited.

Equally important with medical treatment is treatment by the compensation system. This includes employers and insurers as well as doctors and allied health professionals.

WorkCover NSW (Injury Management Initiatives, Workers' Compensation that Works! 1997) reports that compensation schemes in the USA that implement injury management programs show significant savings due to increased return to work and lower medical benefits payments.

The paper, which compares compensation scheme structures internationally and nationally with NSW, notes that the way benefits are paid vary between jurisdictions and that '...there is some evidence from American and Canadian studies to suggest higher benefits are associated with lower probabilities of return to work...' (p. 5). The influence of combining partial benefits with wages to encourage return to work, as has been adopted in some countries, has not been measured.

WorkCover reports that Liberty Mutual, a private US insurer, has developed a methodology for targeting early intervention for 'at risk' cases. The insurer '...reports that this early intervention has reduced the number and duration of long-term claims and reduced overall claims costs.' (p.6). This methodology is based on initial triage (screening for warning signs, probably similar to 'yellow flags') of cases, intensive assessment of likely problems with return to work with 'at risk' cases, and use of medical case management nurses to provide advice in cases requiring intervention.

The authors note that, while NSW workers' compensation legislation contains the important elements for injury management early in the life of a claim, successful US and Canadian schemes have long-term strategies in place for the duration of the claim.

They suggest:

- ◆ improving claims management processes
- ◆ implementing active case management with agreed best practice standards and sound evaluation practices
- ◆ improving complaints/disputes management
- ◆ exploring cost containment for medical and related services and develop better fraud management strategies.

They also suggest that the use of 'Third Party Administrators', as they are known in the USA, may be worth investigating. Third Party Administrators are essentially outsourced case managers whose goal is to facilitate return to work.



## Impairment assessments and use of guidelines

The World Health Organization (WHO) has defined ‘pathology’, ‘impairment’, ‘disability’ and ‘handicap’:

<i>Pathology</i>	the underlying disease or diagnosis
<i>Impairment</i>	the immediate physiological consequences, symptoms and signs
<i>Disability</i>	the functional consequences, abilities lost
<i>Handicap</i>	the social and societal consequences, freedoms lost. <sup>1</sup>

Impairment assessment in a compensation situation, then, should be the assessment of symptoms, signs and physiological consequences of injury.

However, the way in which such assessments are used (and often the way in which they are made and written) in fact makes them assessments of disability. For example, if an assessor notes that there is a loss of range of movement in a joint, and that this loss makes it impossible for the person to perform their normal work duties, then the assessor is making a judgment on disability, not impairment (Niall, 1999, Rondinelli & Duncan in Rondinelli & Katz, pp. 17-18).

A substantial body of literature discusses the use and shortcomings of impairment guidelines. Articles which instruct on the use of guidelines have been excluded from this report, but it should be noted that the most commonly used guidelines, (which are required to be used in some Australian legislation regarding compensation) the American Medical Association (AMA) Guides to the Evaluation of Permanent Impairment, explicitly state that the Guides should not be used as a determination of direct estimates of disability or for ‘direct financial awards’.

However, it becomes impossible for assessors to comply with this direction, for example, when acting under legislation that mandates the use of specific guidelines for the purpose of assessing claimant’s ability to return to work. There are several legislative requirements of this kind operating in Australia.

Nitschke *et al* (1999) tested the intra- and inter-rater reliability of the American Medical Association (AMA) guides’ model for measuring spinal range of motion. Two examiners tested 34 subjects on one occasion and one examiner tested the subjects on two occasions approximately one week apart. The authors found ‘...poor intra and inter-rater reliability for all measurements taken.’ ‘[s]ubjects measured by two different examiners on the same day... could give impairment ratings ranging between 0% and 18% of the whole person...’

The same authors (Natrass *et al* 1999) assessed the validity of the model at the same time and concluded that ‘[b]oth range of motion measurement methods demonstrated poor validity and do not bear any consistent relationship to the level of physical or functional impairment in subjects with chronic low back pain. They concluded that, lacking evidence for a relationship between low back range of motion and impairment, it appeared illogical to evaluate impairment in chronic low back pain patients using a spinal range of motion model when aiming to measure or compensate disability.

Lowery *et al* (1992) assessed 81 normal subjects using the AMA Guides, performing 95 individual measurements of cervical and lumbar spine motion. All of the normal subjects were noted to have some degree of impairment ranging from 2 to 38.5%, with a mean value of 10.8%. The level of impairment increased with age for cervical, lumbar and total impairment percentages. The authors conclude that impairment determination based on spinal motion may not accurately reflect impairment in many patients, and should be questioned because of the large spectrum of age-related changes in motion in a normal population.

In a prospective study of 302 patients who had a fracture of the lower extremity, McCarthy *et al* (1998) assessed the association between impairment ratings, derived with use of the AMA Guides, and measurements of task performance based on direct observation, as well as the patient’s own assessment of activity limitation and disability as recorded on the Sickness Impact Profile. Unlike Nitschke *et al*, they found that impairment ratings (according to a modification of the AMA system) correlated strongly with the performance of functional tasks and with the patients’ reported activity limitations. However, correlations were highest when measures of impairment were based on strength rather than on range of motion, and the authors recommend that the anatomical approach of evaluation based on muscle strength should be the preferred method of evaluating impairment after a fracture of the lower extremity, at least until ‘diagnostic and functional approaches for the measurement of musculoskeletal impairment are refined.’

A recent evaluation of the AMA Guide (4th Edition) by Spieler *et al* (2000) recommends that the Guides remain a tool for evaluation of permanent impairment, not disability, but states that the Guides’ authors need to improve the validity, internal consistency and comprehensiveness of the ratings; document reliability and reproducibility of the results; and make the Guides easily comprehensible and accessible to physicians.

---

<sup>1</sup> Adapted from Rondinelli & Katz, 2000, p.19.



Rondinelli and Duncan (in Rondinelli & Katz, 2000) make similar criticisms of the Guides, suggesting that:

- ◆ definitions and terminology used in the Guides are ‘fraught with inconsistency and ambiguity’
- ◆ content validity of impairment ratings is not well established
- ◆ predictive validity is not well established
- ◆ reliability of specific measures of impairment remains open to debate
- ◆ subjectivity and bias on the part of claimant and examiner, as well as performance effort and consistency, may affect the ratings obtained (p. 28).

Hinderer, Rondinelli and Katz, in the same publication, suggest that ‘...the lack of internal validity may be its most serious shortcoming with respect to the impairment rating process...’ (p. 47). They detail numerous instances of internal inconsistency and suggest that instrument precision levels vary considerably within and between sections of the AMA Guides.

Niall (1996) notes that other guidelines are also in use in Australia. He cites:

- ◆ National Acoustic Laboratory Tables (Australian)
- ◆ Australian College of Ophthalmology Guide
- ◆ University of Pennsylvania Smell Identification Test (UPSIT)
- ◆ Australasian Faculty of Rehabilitation Medicine *Guide to the Assessment of Percentage Impairment of the Back, Neck and Pelvis* (1992).<sup>2</sup>

Niall suggests that the dangers in using guides ‘...arise less from what guides are than from what is expected of them. The danger is that they will have greatness thrust upon them.’ (p. 10). That is, that they may ‘...enable the factitious invention of certainty...’ (p. 8). Guides, he suggests, cannot provide measurements of disability if they are intended to measure impairment; no guide can give 100% accuracy, particularly if measurements are dependent on the patient’s actions; and some guides are more easily applied than others to give valid and reliable results.

## Social determinants of health

When a person becomes permanently impaired and/or disabled due to an injury, there are the immediate physical effects. But following on, there are financial, social, interpersonal and intrapersonal effects. Income is usually reduced immediately. If return to work is not achieved, unemployment follows (with much less hope of eventual re-employment than is possible for the uninjured unemployed). Social status, social networks (for example, friendships at work) and living conditions can all deteriorate quickly and permanently. This, in itself and separate from the effects of the injury, can contribute to ill health.

In 1999, The Royal Australasian College of Physicians published a summary of current research into the socio-economic determinants of health (*For richer, for poorer, in sickness and in health*, RACP, 1999)<sup>3</sup>. The following discussion draws upon that publication.

People living on compensation pay-outs usually have a reduced income. People in lower socio-economic groups suffer disproportionately from ill health and have higher rates of illness and death. They are more likely to report their health and well-being as negative, to experience more chronic illness and stress and are more likely to have unhealthy behaviours such as inactivity, substance abuse and obesity.

People who have had to leave work or abandon their normal activities due to injury usually find their social networks reduced and their social support reduced proportionately. Social support from family and friends has a protective health effect and assist people to recover from illness. People who do not have access to social support die earlier, suffer more illness and are marginalised from society, making them emotionally and physically vulnerable. Social support is an independent risk factor for disease and death.

Unemployment is also a risk factor. Unemployed people suffer worse physical and mental health than those who are employed. They have higher level of chronic and recent illness, higher rates of disability (although unemployment may be caused by the disability rather than the reverse) and increased symptoms of psychological illness, stress and anxiety. They are unlikely to have strong support networks. Long-term unemployment increases the risk of self-harm, suicide and attempted suicide and has a negative effect on the health of children. There is a significantly greater chance that the long-term unemployed will die early.

When one considers that around 23% of workers’ compensation claimants were found by one study to be unemployed up to five years later (Cohen *et al* 2000), it is clear that many claimants qualify as long-term unemployed. Anecdotal evidence suggests that lump sums are often used by claimants to begin small businesses. However, Greenough and Fraser (1996) found that the median time to settlement in their sample of both workers’ compensation and CTP claimants was 29 months. Brand (1983) notes that orthopaedic surgeons usually first assess low-back pain patients 8.9 months after an injury and 9.7 months after surgery and concludes this is detrimental to recovery. Greenwood (1985) supports this. Thus, most claimants, even those intending to begin new work lives, will have been unemployed for long periods.

---

<sup>2</sup> Other guides have been developed by particular government departments, such as Comcare Australia, The Department of Veterans’ Affairs and Centrelink but there is no literature evaluating these.

<sup>3</sup> This publication was adapted, with permission, from Wilkinson & Marmot’s (eds) publication for the World Health Organization: *Social determinants of Health: the solid facts*. WHO 1998.

Few studies have looked at the intersection between the effects of unemployment and injury.

Sanderson *et al* (1995) found that the most important factor in health outcomes when comparing compensable and non-compensable patients was in fact unemployment, with non-compensable patients who had become unemployed because of their injury showing similar outcomes to compensable patients who were unemployed. In both groups, health outcomes were better with the employed group. Cohen *et al* also found that patients with pain who were working had better outcomes than patients with pain who were not working.

Jackson *et al* (1997) looked at the extent to which psychosocial features of employment status predict emotional distress in chronic pain and healthy comparison subjects. They adjusted for length of time unemployed and found that psychosocial measures such as structured and purposeful time use, perceived financial security, skill use, and social support from formal sources were all significant predictors of emotional distress in both the chronic pain and the healthy groups. Structured and purposeful time use emerged as the most significant individual predictor of emotional distress for both samples.

## Current legal perspectives on civil justice systems

Management of expert testimony, the delay in finalising civil cases, and the effect of the adversarial system upon the plaintiff, particularly in the number of medical examinations required, were all identified by interviewees as being relevant to health outcomes for compensable patients.

Over the past decade, the civil justice system in Australia, both Federal and State, has undergone considerable reform, particularly in the area of case management. However, further reform is underway.

There have been some significant publications in this area, notably the Australian Law Reform Commission's report, *Managing Justice: A review of the federal civil justice system; Going to Court: A Discussion Paper on Civil Justice in Victoria* (Sallman & Wright, 2000), from the Department of Justice Civil Justice Review Project; and *Review of the Civil and Criminal Justice System* by the Law Reform Commission of Western Australia (Purdy 1999).

The ALRC's terms of reference were to review the adversarial system of litigation. In addition to recommendations regarding legal practice which are designed to cut time and cost in civil matters, the Commission made a number of recommendations which are relevant to the conduct of civil cases regarding compensation.

These include recommendations regarding legal practice and model litigant standards. Of these, recommendation 18 states the need for national model professional practice rules regarding advising and assisting clients in matters, 'including standards that practitioners shall, as early as possible, advise clients of relevant non-litigious avenues available for resolution of the dispute which are reasonably available to the client' (page 26).

There are other recommendations regarding acting in 'good faith' during alternative dispute resolution (ADR) processes.

Sallman and Wright note that Victorian courts have become much more involved in referring matters to ADR, and suggest that this needs to go further by providing a wide range of dispute resolution mechanisms.

They cite, as an example of successful ADR, the introduction of a settlement conference team from the then State Government Insurance Commission (now the Motor Accident Commission) in South Australia. The number of personal injury actions in South Australia is now a quarter of the number in 1989/90, while the number of accidents has not declined substantially. This decline has occurred at the same time as a statutory ceiling on general damages in personal injury motor vehicle accidents has made litigating less attractive to plaintiffs.

In Tasmania, where settlement conferences are also used, during 1998-99 some 200 settlement conferences were held with settlement achieved at the conference or soon thereafter in greater than 70% of cases (MAIB website annual report).

Of the recommendations regarding costs, the most relevant are those regarding the full disclosure of actual, expected or charged fees. This would include costs for, for example, obtaining a medical opinion. The ALRC notes that there are practice rules or legislation in most Australian jurisdictions that require lawyers to inform clients of potential costs as soon as practicable after receiving instructions, and of the basis of calculating these costs.

However, in a jurisdiction where legal services have been deregulated (NSW), Mark (1999) notes that complaints to the NSW Commissioner for Legal Services often revolve around the failure of solicitors who take clients on a 'no win, no fee' basis to reveal to clients that, win or lose, they will be liable for the solicitors' disbursements, '...which can be substantial as they can include medical reports, barristers fees or other expert reports.' Nor are clients always informed about the liability they face if they lose.

Mark also raises the issue of 'no win, no fee' advertising being an incentive to litigation. In response to similar concerns, the recent review of the Queensland Motor Accident Insurance Act 1994 included, as part of its terms of reference, a request for the review committee to '[a]s a matter of urgency, consider an immediate amendment to the *Motor Accident Insurance Act 1994* to prohibit the soliciting of injured persons to make claims under the Act.'

## Adversarial system

Justice Ipp (1995:a) defined an adversarial system as one which ‘...contains the following elements:

1. adjudication by a neutral tribunal, acting with a considerable degree of passivity;
2. the preparation and presentation of the case by the parties; and
3. a structured procedural system governing the proceedings.’

He points out, with numerous quotes from other authorities, that the adversarial nature of any proceedings is a means to an end; the end being the discovery of the truth of the matter before the court. He cites dissatisfaction with the then current system from Australia, the UK and the USA, and suggests that ‘...there is a striking similarity in Australia, England and America amongst the views of leading judges and commentators as to the causes of the defects in the administration of justice and as to the measures which should be taken to combat them.’ (p. 725).

Since 1995, reforms have taken place and continue to take place in those jurisdictions. In particular, the introduction of case management by judges has reduced the ‘passivity’ of the judiciary. The most radical set of changes is occurring in Britain following the publication of *Access to Justice: Final Report to the Lord Chancellor on the Civil Justice System in England and Wales* (Woolf, 1996). The changes, embodied in new protocols and practice notes, are intended to cut delays and costs and to improve access to litigation across socio-economic groups. They include judges being very active in case management.

Not all parties agree that these changes will achieve their aims (see, for example, Browne-Wilkinson 1999), in particular with regard to reducing costs. Access to justice appears to be less problematic in Australia than in the UK (see Gleeson, 1999). Extending the case management system, however, has received mostly positive responses.

Sallman and Wright, for example, found amongst the Victorian civil justice community ‘...overwhelming support for caseflow management as a means of improving the litigation process...’ and for the judiciary having an active role in case management systems (p. 66).

The ALRC identified features associated with successful case management in the federal system, such as judicial commitment and leadership, court consultation with the legal profession, early assessment of the issues and settlement prospects of cases, and close supervision of case progress.

Creighton (1999) suggests that case management ‘...is not a traditional feature of adversarial systems, but more a halfway between the traditional inquisitorial practice of having a judge have control over the investigation, procedure and issues to be argued and the traditional adversarial concept of a judge as a referee.’ (p. 66).

Creighton argues that any radical change to the adversarial system (for example, a move to a full inquisitorial system such as operates in Germany such as that suggested by Browne-Wilkinson) may be contrary to the intentions of the Australian Constitution. She concludes that an inquisitorial role for judges ‘...sits uneasily with our notions of procedural fairness and the attainment of justice and our Constitution may prohibit such modification of judicial functions and the judicial process.’ (p. 67).

Justice Young (1997) also cautions against the adoption of the inquisitorial method, noting that this, too, has its drawbacks and that ‘...many European Judges and lawyers are now looking to England for a similar model.’ (p. 577). He suggests that the adversarial system has been designed over centuries ‘...to protect the individual’s basic rights when they are most at risk.’ (p. 577).

## Expert testimony

The one area of the civil adversarial system that comes under most criticism is the use and management of expert witnesses.

Bryant (1998) identified the problems as being:

- ◆ some experts are biased and in our present adversarial system, allowing parties to call experts will always promote that risk;
- ◆ some experts are ill-trained;
- ◆ expert evidence can be costly to both parties;
- ◆ expert evidence can bog down a trial.’ (p.38).

The Woolf report suggested that experts are partisan, polarised in their view of the issues, unwilling to concede matters (including areas of common ground between opposing experts) and act as advocates who comment outside their field of expertise. Justice Cooper (1998) noted that, as stated in the Woolf inquiry, the experience of Australian judges was that ‘...lawyers instruct their experts prior to any meeting not to agree to anything or if anything is agreed to, it must be subject to later ratification by the lawyers acting on behalf of the client.’ (p. 207). Thus it becomes difficult to define the exact matters that are at issue between the parties. Justice Cooper also states ‘...clear evidence exists in Australia and the United Kingdom that expert shopping occurs whereby expert opinions are sought and instructions and material manipulated until an expert report favourable to the party seeking the report is obtained.’ (p. 207).

The ALRC notes, in addition, that questioning by lawyers may lead to the presentation of an inaccurate picture, which will mislead the court and frustrate the expert; that judges have no criteria to resolve issues where a substantial disagreement concerning a field of expertise arises and success may depend on the plausibility or the self-confidence of the expert, rather than the expert's professional competence (p. 419). The Commission also noted that, although it is generally agreed that Federal courts and tribunals have sufficient powers to manage, obtain and control expert evidence, these powers are not always used effectively.

Various answers have been suggested for these problems.

In the USA, the American Association for the Advancement of Science is running a trial program, Court Appointed Scientific Experts project (CASE) where, when it is clear that the outcome of a trial will depend upon expert evidence, the court can request CASE to find an impartial expert who can then either advise the judge in camera on the meaning and validity of the evidence presented (an educational role) or testify in court themselves (Kaiser, 1999, Kiernan, 1999, Runkle, private communication, 2000). American federal judges already have the right to use an expert in this way (under Federal rule of Evidence 706), but the difficulties of locating an appropriately 'expert' and impartial opinion meant that this rarely occurred.

In the UK, under the new procedural rules introduced by the Access to Justice report, the basic premise is that the expert's function is to help the court, not to advance the case of the side by whom he or she is paid (Woolf, 1996, Friston, 1999). Clinical experts will increasingly be appointed jointly, either with the parties' agreement or at the direction of the court. This is intended to reduce the use of 'hired guns' – medico-legal 'experts' who bias their reports to suit the needs of their clients.

Clinical reports will be standardised (see <http://www.open.gov.uk/lcd/civil/procrules> for details). These reports must include not only the expert's own views but also those of any other 'relevant recognised body of opinion'. That is, there is a push towards evidence-based medicine in determining the contents of medical assessments.

Expert evidence will only be accepted by the court if it is reasonably required to resolve the issues before the court. Most evidence will be put to the court in writing; oral evidence will be the exception. Fees for medico-legal work are also likely to fall, as they must be 'in proportion' to the value of the claim. The court may limit the amount that an expert is to be paid.

In Australia, the guidelines regarding use of expert witnesses before the Federal Court also state that '...an expert witness's paramount duty is to the Court and not to the person retaining the expert...' (Black, 1999).

These guidelines require written reports, including details of the expert's qualifications, the literature or other material used in making the report, and the process and assumptions behind the report. It also requires experts to advise the court if they change their mind about their evidence and if their opinion is not fully researched because the expert considers that insufficient data are available.

The guidelines also state, '...if experts retained by the parties meet at the direction of the Court, it would be improper conduct for an expert to be given or to accept instructions not to reach agreement'.

The ALRC has suggested that the Federal guidelines be adopted by other Federal courts and tribunals and that the Australian Council of Professions should develop a generic template code of practice for expert witnesses, drawing upon the Federal Court's guidelines.

The Commission also recommends:

- ◆ prehearing conferences and other communication between experts
- ◆ experts being able to be asked questions by the other party in writing prior to trial
- ◆ courts encouraging parties to agree jointly to instruct expert witnesses
- ◆ development of procedures for adducing expert evidence in panel format wherever possible
- ◆ federal review tribunals should have the legislative right to require parties to agree to the instruction of a single expert for the case, where the tribunal considers this appropriate. Additional experts should then be permitted only in exceptional circumstances and the costs of additional experts consulted by the parties would not be recoverable
- ◆ legislation governing tribunals rules require prompt disclosure to applicants of all medical reports
- ◆ applicants should not be able to claim legal privilege for expert medical reports created for the dominant purpose of anticipated or pending review tribunal proceedings.

# Literature Review: Discussion

---

## Was there evidence that people with compensable injuries had poorer health outcomes than those with non-compensable injuries?

Most data in this review lies in the NHMRC's category of Grade III-2 evidence, that is, comparative studies with concurrent controls and where allocation is not randomised [cohort studies]. This level of evidence, while not as conclusive as Grades I and II, is nonetheless valuable, particularly where there is an accumulation, as in this case.

While there is an accumulation of data, which, while not conclusive, indicates that patients with compensable injuries have poorer outcomes than those with non-compensable injuries, there is little data on why this is so, and there are many gaps in the evidence.

## Gaps in evidence

One of the precipitating factors of this project was the commonly held belief that rates of assignment of permanent disability have risen sharply in Australia in recent years. There is some evidence regarding this from overseas, but none available from Australian sources. The collection and analysis of such data was outside the scope of this project, but would be of use in assessing the magnitude of the problem.

The questions set out in the literature review immediately generated others for which no reliable data could be found. For example, within medico-legal systems, did different systems have different effects? Were there, for example, differences in outcomes for workers' compensation claimants vs CTP claimants? Did different types of conditions have different outcomes? These questions remain, to a great extent, unanswered by the literature review. While there are some studies that address small aspects of these questions, none of them can be answered with any degree of certainty. Perhaps the most surprising result of the literature review was that, considering the cost to individuals, organisations and governments of compensation schemes, so little research had been done into their effects.

Despite the evidence of poorer health outcomes for patients with compensable injuries, there has been little exploration on why this is so. Anecdotally, there are many explanations, which are discussed in the next section.

The literature review showed evidence supporting only some of these contentions – which does not mean that they are not all occurring.

Greenough and Fraser's study showed that those who were claiming lump sums had poorer outcomes than others. This may have been because those who were more severely injured were more likely to proceed to civil action. But it may also be because the lump sum claimants had far longer off work and were far less likely to have returned to work than other claimants. Was it the court case or the unemployment that caused the distress?

Given other research into the health effects of unemployment, and Sanderson *et al's* work in trying to disentangle these two factors, the effects of unemployment (and the disruption to social networks, sense of identity, etc, which this brings) may be the more important.

However, Greenough's claimants believed that the compensation process itself had been too stressful and slow, as well as blaming it for their inability to get a job afterwards. Perhaps both are true. There is too little evidence in this area to come to any determination.

Cohen *et al's* study (2000), although dealing with a small and perhaps unrepresentative sample, shows also that poor initial and on-going treatment of neck and back pain may be at fault. Cassidy *et al's* study (2000) also showed that initial treatment of neck pain may have significant effects on outcomes.

While this is important, it does not explain the difference between outcomes for patients with compensable and non-compensable injuries, since they presumably receive the same type of treatment from GPs and allied health professionals. But do they? One study has shown that workers' compensation cases are operated on more frequently than others in the USA (Taylor *et al*, 1996). Perhaps there are other differences in initial treatment which are not apparent. Since Cohen *et al's* study looked only at patients with compensable injuries, there are no Australian data on this subject.

From a GP's or physiotherapist's point of view, the main difference between a patient with compensable injuries and one with non-compensable injuries (apart from the extra paperwork) may be that the patient will not be out of pocket, no matter what treatment is initially carried out. It may well be that doctors and physiotherapists who do not bulk bill are more inclined to both refer and to continue treatment if the patient will not have to pay, on the grounds that 'it might help and it can't hurt'. This needs to be investigated, since it may well hurt.

## What might be the cause(s) of poor health outcomes for patients with compensable injuries?

In looking for evidence of and for causes of poorer health outcomes in people with compensable injuries, it is easy to overlook the fact that most people with compensable injuries recover and return to work or to normal activities. Even in those studies where compensated patients have the worst outcomes, the **majority** of those studied have good outcomes.

Few studies have actually investigated causes of the poor health outcomes in some compensated patients. The few relevant studies we do have, as discussed above, occasionally throw up intriguing and provocative pieces of information, but these are almost incidental to the primary purpose of the research.

While there are studies that do seem to establish a clear link between compensable injuries and poor outcomes, there are none that drill down to the next level by comparing the subjective, legal and treatment experiences of those involved with similar patients who have not gone through the compensation process<sup>4</sup>. There are no studies, for example, which directly examine the role of insurance company procedures in health outcomes or studies that compare the outcomes of those whose claims are disputed with those whose claims are not disputed.

Turk and Okifujia's work on the differences in patients with non-compensable injuries between those with gradual onset and those with traumatic onset of pain suggests that the initiating event may be significant: that one of the reasons patients with compensable injuries have poorer outcomes is that their injury is usually the result of an accident; a sudden and shocking change in health status.

This is an isolated study and the results need to be replicated, but it is provocative, none the less. If these results were confirmed, then addressing the psychological aspects of injury at initial treatment would become equally important with addressing the physical aspects. The effects of traumatic onset may be exacerbated by anger, as suggested by Mayou (1996). Turk and Okifujia did not examine the causes of non-compensable injuries in their patients. It would be interesting for any further study to address whether those patients with non-compensable injuries with poor outcomes felt angry with an outside agency or blamed others for their pain.

What has become clear through this research is that there is no single, easily isolated cause of poorer health outcomes for compensable cases. Some of the factors that may affect outcomes have been identified by research, but it is very likely that it is the interaction of these factors that leads to poor health. Below are listed the factors that may be contributing to poor outcomes.

In the order in which the patient encounters them, the factors fully or partly implicated in the literature identified are:

- ◆ The psychosocial environment of the injured person at the time of injury (for example, low job satisfaction, poor social networks, lack of purposeful use of time). This includes societal attitudes towards injury and compensation.
- ◆ The psychosocial environment of the injured person after the time of injury (for example, a workplace not prepared to adapt to a return to work program, family members unsupportive of rehabilitation programs)
- ◆ The psychological vulnerability of the injured person (this will be affected by pain and by psychosocial factors)
- ◆ The initial response to claimants by insurers (for example, acting as though claimants are automatically assumed to be fraudulent, thus pushing them into a defensive 'I'll show them I'm really sick' attitude)
- ◆ The management of initial treatment (for example, in non-specific musculo-skeletal injuries, not identifying psychosocial risk factors ['yellow flags'], not encouraging resumption of normal behaviours as far as possible, not encouraging return to work or normal activities, etc.)
- ◆ The handling of case management by insurers (for example, not developing appropriate return to work programs nor monitoring these, not providing claimants with good information about the effects of long-term sick leave, etc.)
- ◆ The handling of case management by treating doctors, including specialists (for example, not reviewing treatment by service providers and continuing treatment which is not helping, providing unnecessary treatment, not giving early referral to pain management programs, not addressing psychological problems such as depression, etc.)
- ◆ The number and type of medical examinations required by the insurers and by the claimant's lawyers. The effect of these appears to be twofold: to entrench illness behaviours and to prejudice the claimant further against the insurance company.
- ◆ The length of time away from work. Unemployment is, in itself, a risk factor for poor health. There are multiple and interrelating effects of being away from work, including loss of sense of identity, loss of social networks, loss of economic control and independence, loss of social status, loss of financial security (such as loss of the family home), and so on. Long-term unemployment is notoriously hard to break. (Where unemployment is caused by injury, this is exacerbated by employer's reluctance to employ anyone with pre-existing injuries because of risk to workers' compensation premiums and the perceived risk of re-injury.)

The factors that have been identified by interviews with stakeholders but have not been formally tested are:

- ◆ The adversarial system of managing compensation cases, which encourages parties to take up fixed opposing positions and creates a climate where getting a result in the court case becomes the goal of both parties, rather than fully rehabilitating the injured person
- ◆ Encouragement from some plaintiffs' lawyers to remain inactive in order to ensure the highest possible settlement
- ◆ The length of time between injury and settlement. In one study, 29 months was the average time to settlement. While some legislation requires that the injury be 'stabilised' before settlement, stakeholders suggest that cases are often 'dragged out' unnecessarily, particularly by insurers' lawyers. Ordinary delays in the court system are also a problem.
- ◆ The sense of powerlessness engendered by being caught up in 'the system'; having no control (except by dropping the claim) over when or how there will be a resolution, no control over decisions made about the claim, no control over number and content of medical examinations, etc.
- ◆ The type of compensation offered; systems with no or limited compensation for pain and suffering may produce better outcomes. (Why this is so has not been fully explored. Many of the points listed above may be relevant.)

---

<sup>4</sup>The Commonwealth Department of Family and Community Services is currently (2001) undertaking a qualitative study interviewing people who have gone through the compensation process in an attempt to identify factors which affect recovery both positively and negatively.



Many of these elements, taken together or separately, and added to the pain and disruption of the injury, may cause the injured person to undergo considerable stress. There are a number of studies, outside the scope of this report, which show connections between negative stress and poor health. Certainly the connection between negative stress and a reduction in efficient immune system operation is well documented. What has also been well described is the relationship between stress-related illness and 'stress mediators' (Ellis, 2000); that is, psychosocial factors which act to 'buffer' the person against the effects of negative stress. This research dovetails precisely with the research into non-specific low back pain (see IASP, 1996) and the psychological effects of compensable injuries.

It is clear, therefore, that addressing only one of these issues (for example, medical treatment) is likely to produce some results but may not substantially reduce poor health outcomes. It is likely that all groups and organisations involved in the management of people with compensable injuries must modify their processes and procedures in order to achieve real improvements for injured persons.

#### **Were there solutions to these problems currently being used elsewhere?**

Apart from the fairly drastic Lithuanian approach of not having compensation at all, scarcely likely to address all health concerns of injured persons, there were few models that could be adapted for use in Australia, although there were some modifications to systems (such as tightening of medical evidence rules in the USA) that may be useful.

The NSW Motor Accidents Authority approach to dispute resolution appears to be a systemic reform that offers a good model for reducing ill effects on injured persons. This model, only recently introduced, is being monitored. The MAA is beginning (March 2000) a longitudinal study of injured persons under the scheme, tracking factors that may affect health outcomes. The study will compare persons injured while the old pre-dispute resolution scheme was in place with those injured under the new scheme. The study is expected to take at least three years.

The New Zealand Accident Compensation Corporation education package for treating doctors on acute and chronic back pain provides a model for Australian medical education. Results from that intervention have not, to our knowledge, been assessed.

Linton and Andersson's study on interventions to reduce long-term disability resulting from chronic pain is a significant pointer towards management of disabling injuries and the prevention of long-term disability.

The Saskatchewan change in CTP legislation (eliminating most compensation for pain and suffering), certainly reduced numbers of claims and also appeared to improve health outcomes for claimants. Eliminating compensation for minor pain and suffering (as NSW CTP legislation has done by putting a threshold of 10% impairment before non-economic loss may be claimed) will also eliminate a large number of disputes over claims, and thus the effect of the adversarial process on claimants.

This is a difficult area: are we endangering justice in order to protect health? If the well-being of the injured person is the goal of the system (and that is a large assumption), then should that person be prevented from entering a 'toxic' system 'for their own good'? This appears to be a paternalistic measure (and may be a convenient argument for those who wish to reduce the costs to society of the compensation scheme being discussed).

If it is the system that produces poor health outcomes, should not the system be changed rather than the remedies available to the injured person? The NSW MAA model has done both, and thus cannot serve as a test case for pure system change.

Any system change must have the same or better ability to provide natural justice to plaintiffs and defendants as the current adversarial system. Can a system that removes the right to a day in court do so? Can the day in court be modified so that the effect on the claimant is reduced (for example, by having court appointed medical experts to reduce the number of examinations necessary), or by changing the way expert testimony is handled?

The seminar held on 6 October 2000 was held to examine these and other questions.

# Interviews and Seminar: Opinions from Stakeholders

---

A list of interviewees and participants at the seminar is available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

Given the lack of hard data in many of the areas under consideration, informed opinion from those most closely concerned in the compensation process becomes crucial.

Interviews before the seminar guided the development of the discussion paper and the options for change presented on the day. In particular, the researcher looked at whether different players in the system (treating doctors, medical specialists, medical assessors, lawyers, claims managers, insurance companies) perceived the problem(s) in the same way. In the absence of hard data, was there consensus on problems and causes?

Seminar discussion and small group work provided other opinions and broader perspectives.

## Format of seminar

The day was opened by Dr Chris Baggoley, the Chair of the Committee of Presidents of Medical Colleges. Dr Ann Long, immediate past President of The Australasian Faculty of Occupational Medicine (AFOM), summarised the concerns and events which had led to the seminar.

Five 'perspectives' papers were then delivered. Copies of the papers are available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

- ◆ Consumers Ms Fiona Tito (Enduring Solutions)
- ◆ Medical Dr Dwight Dowda (AFOM)
- ◆ Legal Ms Susie Linden (Phillips Fox Lawyers)
- ◆ Insurer Ms Shayne O'Reilly (NRMA)
- ◆ Government Ms Kate McKenzie (WorkCover NSW).

Dr Niki Ellis summarised the issues brought out in the perspectives papers and there was general discussion. The summary of issues is available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

After lunch, the Research Officer for the project, Ms Pamela Freeman, spoke to the discussion paper which had been circulated prior to the forum and introduced the small group work that followed. Each small group was provided with options for change in their interest area, and asked: Is change possible? Is it viable? What are the opportunities and barriers? The handouts are available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

At a plenary session, group members reported on areas of agreement in the groups and suggestions for further action. This was followed by a general discussion chaired by Dr Ellis.

Mr Steve Mark, the Legal Services Commissioner for NSW, then spoke on 'Improving the outcome for the individual the role of the professionals and the political process'. This paper is available on the AFOM website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

Dr Ellis summarised the day's events and sought agreement from the participants regarding the next steps to be taken. The day was closed by Dr Ann Long.

## Agreement on problems

Across all interviews and participants, there was agreement that injured persons involved in compensation cases (that is, lawsuits) have poorer health outcomes than is necessary. While many people move through the system successfully, a proportion do not. There is scope for improvement that we should strive to make.

There was also general agreement that:

- ◆ there is a lack of basic data which would allow accurate description of the problems or development of solutions.
- ◆ the problem lies not with catastrophic injuries but with minor to moderate injuries which are harder to define and diagnose.
- ◆ the rate of classification of permanent disability is on the increase, although figures to confirm this are hard to come by.

The discussion paper was accepted as a reasonable description of the problems, given our significant gaps in knowledge and understanding. However, the Law Society and Plaintiff Lawyers Association representatives were concerned about accepting the paper because of suggestions that it contained that the adversarial process may be contributing to adverse health outcomes, and the Plaintiff Lawyers Association representative later expressed uncertainty about the conclusiveness of the evidence presented.



The Insurance Council of Australia was also concerned to see experience with insurers as being portrayed as always negative and adversarial. The discussion paper is available on The Australasian Faculty of Occupational Medicine website: [www.racp.edu.au/afom](http://www.racp.edu.au/afom)

The summary of problems used in the discussion paper is included here at Table 1. It has been updated since the seminar to include new evidence suggested by participants.

This summary examines the issues which may be contributing to poor health outcomes for patients with compensable injuries. It takes the issues in the order in which they might be met by a person with an injury. There is, of course, considerable overlap in some issues. Not all injured persons will encounter every problem described, nor will they necessarily encounter them in the order presented in the Table. Relevant evidence has been cited where it exists.

**Table 1: Medico-Legal Effects on Illness in Claimants: Problem Points**

Intersection point	Issues	Effects	Evidence
Pre-injury	<p>Consumers ignorant of: Best practice in treatment/treatment options; Claims procedures; Legal processes, especially: Costs in 'no win, no fee' situation; Likely length of process; What they will be required to do; Long-term effects of litigation on health (assumed, not yet proven).</p> <p>Social environment encourages litigation (ads on TV &amp; radio from compensation solicitors, attitude of entitlement, gap between rich and poor, belief that insurance companies 'can afford it'). For claimants who are in unsatisfying, difficult or poorly paid jobs/lifestyle, a settlement may represent the only chance they will ever have to see a large sum of money.</p>	<p>When injury occurs: pressure put on GPs by patients to deliver inappropriate treatment/certificates/opinions; pressure put on doctors and allied health professionals by patients to continue ineffective treatment may engage in litigation without fully understanding its possible consequences (costs, health, relationships, etc)</p> <p>Consumers are more likely to lodge a claim. Consumers are more likely to want payment over and above their medical and associated costs.</p>	<p>Several studies indicate lack of knowledge amongst consumers. See Osborne &amp; Meikle (1998), PIR (1993), Enduring Solutions Pty Ltd (1998 - NT Work Health system study), Motor Accidents Authority of NSW (Nov 1998).</p> <p>Anecdotal evidence regarding relationship with GPs.</p> <p>It is hard to draw conclusions about changes in propensity to litigate. In NSW claim rates have risen steadily since 1989 and the rate of litigation has risen from 19.7% of claims in the 1989/90 accident year to 32.9% in 1994/95. However, claims rates in other jurisdictions have not followed the same pattern. In WA, claims have declined over the past seven years until this year, when they increased, as they also have in Tasmania. Victorian rates dropped with the amendment of the <i>Transport Accident Act</i>.</p> <p>The proportion of those represented by a solicitor has risen significantly since the NSW scheme began - 50% for 1990/91 accident year claims, 67% for the 1994/95 accident year. In workers' compensation, the number of reported injuries has dropped over the last decade but there is no evidence about claims rates.</p>

**Table 1: Medico-Legal Effects on Illness in Claimants: Problem Points (continued)**

Intersection point	Issues	Effects	Evidence
Immediately post-injury: claimant recognises potential for compensation	<p>The very fact that an injury is compensable may have an effect on treatment, management and perceptions of all involved.</p> <p>The type of scheme and benefits available may influence outcomes.</p>	<p>Patient with a compensable injury has a longer recovery time and higher reported perceptions of pain, particularly where pain and suffering (non-economic loss) receive monetary benefit. Return to work or normal activities is delayed.</p>	<p>See, for example, Atlas <i>et al</i> (2000), Cassidy <i>et al</i> (2000), McNaughton (2000), Rainville <i>et al</i> (1997), Schrader <i>et al</i> (1996), Hadler (1996), Turk &amp; Okifujia (1996), Taylor <i>et al</i> (1996), Salcedo-Wasicek (1995). However, the exact nature of the effect has not been fully explored.</p>
Immediately post-injury: patient presents for medical attention	<p>Many GPs (and A&amp;E units) are ignorant of appropriate treatment for musculo-skeletal/soft tissue injuries, and may be likely to continue to treat injuries for which they have no expertise.</p> <p>GPs may be pressured by patient to provide ‘generous’ certificates, and to refer for inappropriate treatment (particularly for whiplash). In tightly-knit communities, GPs may feel pressured to comply with patients’ expectations in order to maintain their relationships within the community. Even where pressure from patients does not exist, GPs may feel the need to ‘do something’, thus prompting inappropriate treatment.</p>	<p>Patient receives inappropriate management or treatment or is not referred to appropriate specialist in a timely fashion.</p> <p>Patients do not return to work or to daily activities as early as possible. Patients may begin to think of themselves as disabled instead of working towards full recovery.</p> <p>Patients receive inappropriate treatment.</p>	<p>Cohen <i>et al</i> (2000), Anecdotal evidence.</p> <p>Anecdotal.</p>
Post-injury: Claimant contacts insurance company	<p>Insurance company case management processes are based on an assumption that claimants are probably fraudulent. Attitudes to claimants are therefore non-conciliatory, introducing an adversarial element from the very beginning of the claim.</p>	<p>Claimants are more likely to become defensive, aggressive and litigious in response. Claimants are stressed by this process, with possible negative health effects.</p>	<p>Consumer studies, such as Gribich <i>et al</i> (1998) repeatedly quote claimants as saying they were treated like ‘the enemy’ by insurance companies and describing increased stress and anger as a consequence of this attitude and the adversarial system followed.</p>
Post-injury: Claimant contacts solicitor	<p>This may occur before contact with the insurance company.</p> <p>Solicitors who specialise in personal injury cases may inappropriately encourage claimants to enter into litigation. They may not provide clear information about the likely costs to the claimant of litigation. Claimants may believe that if they lose the case, they will not have to pay anything at all.</p>	<p>Inappropriate litigation occurs.</p> <p>Claimants who are unsuccessful find themselves worse off than if they had not undertaken the litigation. They may lose assets (such as their house) which will, together with any disability, reduce their lifestyle and place considerable stress on their relationships.</p>	<p>Anecdotal</p> <p>Anecdotal, since follow-up studies have concentrated on those who received lump sum settlements.</p>

**Table 1: Medico-Legal Effects on Illness in Claimants: Problem Points (continued)**

Intersection point	Issues	Effects	Evidence
<p>Post-injury: Treatment process</p>	<p>Over treatment or continuation of inappropriate treatment may continue because: doctors/allied health professionals are ignorant of appropriate measures; poor case management by insurers, treating doctors and rehab providers means that claimant progress is not reviewed regularly, allowing treatment which is not working to continue; there is a financial incentive to continue the treatment; for the treatment provider there is a psychological pressure to continue the treatment (not to 'give up' or fail the patient, not to admit impotence); this is associated with poor understanding of illness behaviour and how to manage this; there is pressure from the patient to continue, either because of advice from doctors or solicitors, or because they, too, do not wish to give up.</p>	<p>Becomes less fit, less able to perform daily tasks; claimants become depressed and increasingly distressed, relationships suffer or wither (for example, workplace friendships); the claimant is under increased stress with fewer resources with which to cope.</p>	<p>Evidence exists that inappropriate treatment (such as chiropractic treatment for whiplash) increases recovery time (Cassidy <i>et al</i>, 2000). The social and associated physical effects are poorly documented. However, there is a body of literature relating to 'compensation neurosis' which clearly documents psychological effects. (For a discussion of this literature, see Mayou [1996].) A significant body of evidence exists regarding the effect of long-term unemployment on health and some evidence that unemployment is at least as important as disability in health outcomes of claimants. See RACP (1999), Wilkinson &amp; Marmot (1998), Sanderson <i>et al</i> (1996) and Jackson <i>et al</i> (1997).</p>
<p>Post-injury: referral to specialist(s)</p>	<p>Since some GPs' knowledge of musculo-skeletal injuries is limited, patients may be referred inappropriately or too late.</p>	<p>Treatment is compromised, outcomes adversely affected.</p>	

**Table 1: Medico-Legal Effects on Illness in Claimants: Problem Points (continued)**

Intersection point	Issues	Effects	Evidence
<p>Post-injury: Insurance claim disputed</p>	<p>Depending on process followed, several problems may emerge. Claimant is encouraged (by self or others, particularly solicitor) or believe that, unless symptoms continue until the date of settlement, monies gained will be very low or non-existent. Claimant enters a usually prolonged process without clear understanding of length of time, stress and risk involved.</p> <p>Claimant begins process of establishing degree of impairment, often involving numerous assessments by specialists retained by own solicitor and by insurance companies (see below). This process varies between jurisdictions and type of claim in some schemes; does not see multiple doctors but is assessed by medical panel or independent medical assessor. Settlement is delayed until after 'stabilisation of injury'.</p>	<p>Claimant continues in illness behaviour. As with inappropriate or over treatment, this results in negative health impacts: they become sicker, weaker, more depressed and progressively less able to resume normal life. Their concept of self may shift to identify as 'disabled'.</p> <p>As medical evaluations proceed, claimants become defensive, entrenching their illness behaviours and identification with symptoms.</p> <p>Illness behaviours and beliefs are prolonged at least until settlement. By this time physical and psychological effects may be irreversible.</p>	<p>See, for example, Brena <i>et al</i> 1979.</p> <p>Brand (1983) notes that orthopaedic surgeons usually first assess low-back pain patients 8.9 months after an injury and 9.7 months after surgery and concludes this is detrimental to recovery. Greenwood (1985) supports this.</p>
<p>Referred to assessment(s)</p>	<p>Processes for assessment (both for normal claims management and for resolution of disputes) are varied: use of guidelines is controversial, even when guidelines are required by legislation.</p> <p>Skill in assessment is variable; particularly with musculo-skeletal injuries. Some assessors do not treat injuries at all (medico-legal 'specialists'). There is disagreement about whether this affects the validity of their judgments.</p> <p>Assessors may or may not have been trained.</p> <p>Assessment may be biased, particularly when given by an assessor paid directly by one party.</p> <p>There is confusion regarding what doctors are assessing: technically it is 'impairment'; in practice, their assessments are often used to determine 'disability'.</p> <p>Assessment by appropriate allied health professionals may be necessary to determine both 'disability' and 'handicap'. This often does not occur.</p>	<p>Claimants may not receive accurate assessments; assessments may not be in a form which is most useful in terms of achieving just settlements or helping courts to achieve just decisions.</p>	<p>A substantial body of literature discusses the use and shortcomings of guidelines. See, for empirical studies, Nitschke <i>et al</i> (1999), Natrass <i>et al</i> (1999), Loeding &amp; Greenan (1998), McCarthy <i>et al</i> (1998), Gloss (1982), Lowery <i>et al</i> (1992). Conclusions reached vary with the guideline being examined and the trial design.</p> <p>There is little empirical evidence for bias but it is widely discussed in critiques of all tort-based/adversarial compensation systems. For a recent Australian perspective, see the Australian Law Reform Commission's <i>Managing Justice: A review of the federal civil justice system</i> (1999).</p>

**Table 1: Medico-Legal Effects on Illness in Claimants: Problem Points (continued)**

Intersection point	Issues	Effects	Evidence
In court/ at tribunal	<p>Medical evidence may be adversarially presented. Judges may not be familiar with terminology or definitions (for example, between impairment and disability). Methods of examination and cross-examination may make it impossible for doctors to give a full explanation of their findings.</p>	<p>Evidence is obscured or poorly understood, leading to poor judgments. Costs to both insurers and claimants may be high. Costs in court time are high due to extended length of case. Costs to community therefore increase, in both premiums and dollars spent on legal system.</p>	
Finalisation of claim	<p>Most claims are finalised on recovery or proceed to settlement without litigation. Most cases that are litigated are settled out of court.</p> <p>The amount settled, while often seeming large, does not, in fact, once costs are removed, provide enough for severely disabled people to live comfortably in the long term.</p> <p>Claimants may lose the case and still be liable to pay all costs other than those of their solicitor.</p>	<p>Claimants may feel dissatisfied with not having 'their day in court' and this may increase psychological distress, particularly if the settlement is substantially lower than that initially predicted by their solicitor.</p> <p>Over their lifetime, severely disabled claimants are likely to experience poverty, with associated physical, psychological and social ill effects. Payments of costs without a settlement may severely impoverish claimants.</p>	<p>Insurers reject claims at a rate of around 10% in the NSW CTP scheme.</p>
After the claim: long-term effects	<p>Once claims are settled, there is no follow-up of claimants. Rehabilitation ceases unless paid for by the claimant.</p> <p>While the effect is still not thoroughly documented, it is clear that people who suffer compensable injuries have poorer health outcomes, overall and in the long term, than those with similar but non-compensable injuries.</p>	<p>Claimants, especially those who have gone through litigation, may experience pain for longer periods, have poorer recovery and more long-term negative health effects than either non-claimants or claimants whose claims were handled without litigation. Claimants may cease rehabilitation efforts due to cost.</p>	<p>See Cassidy <i>et al</i> (2000), Atlas <i>et al</i> (2000), Molloy <i>et al</i> (1999), Greenough &amp; Fraser (1996), Rainville <i>et al</i> (1997), Turk &amp; Okifuji (1996), Hadler <i>et al</i> (1995), Sanderson <i>et al</i> (1995), Salcedo-Wasicek &amp; Thirlby (1995) among others.</p>

# Identified Issues and Suggestions for Improvements: Seminar

---

## Consumer issues

### Perspectives papers

The following issues were identified in the perspectives papers:

- ◆ disempowerment (because the injured person is not the policy holder and therefore not seen as ‘the consumer’ or ‘the client’)
- ◆ Insurers’ systems automatically doubt the veracity of the claim
- ◆ confusion amongst injured persons about the process
- ◆ frustration with both the effects of the injury and the process
- ◆ inadequate research into the effects of different compensation systems and health outcomes (on for example, on costs, or likely side effects) systemic issues include barriers to early return to work and perverse incentives for remaining ill in order to acquire lump sum and other types of payments
- ◆ lack of developments in compensation sector that have occurred in health sector (i.e. EBM, integrated case management, empowerment of consumers)
- ◆ a medical system which is driven by income for treating health professionals. This acts against early return to work
- ◆ poor clinical practice (initial treatment and poor case management) leads to poor outcomes
- ◆ there is little information available to consumers about likely financial outcomes – both in terms of amounts awarded and the long-term financial outcomes for those who receive lump sums. Development of a database regarding financial benefits and legal costs would give consumers better information upon which to base a decision. Information already exists regarding long-term outcomes which could be made available to consumers.

(Ms Tito, Dr Dowda, Ms O’Reilly, Mr Mark).

These points were supported by speakers from the floor who raised the need for informed consent, although others spoke of the difficulty of dissuading claimants from going down a path of litigation, because of community expectations and values.

### Participants’ conclusions and suggestions for improvement (Consumer group)

The group that looked at consumer issues noted that the need for informed choice and empowerment of consumers is not unique to compensable injuries. However, in this sector there is a need for clear and consistent information, delivered as early as possible in the compensation process.

This could take the form of written information, videos, peer education and support. It should be produced in collaboration with consumers who have experienced the compensation process and should address the expectations of consumers.

Treatment of consumers should be based on evidence; there is therefore a need for research into ‘what works and what doesn’t’ in terms of treatment and case management.

The group believed that different stakeholders in the process should share their understandings about the process and about best management practices and that research should ideally be jointly commissioned. This could include surveys, case series and analysis of existing data.

The group recognised the importance of psychological/motivational factors in:

- ◆ method of assessments and what is said
- ◆ employer role
- ◆ skill sharing and development for those claimants who are having difficulty returning to work or to their normal activities.

This could include bringing in employment-specific services, such as the job network scheme, rather than relying solely upon rehabilitation providers.

That is, the group agreed that the psychosocial environment can also contribute to good outcomes. This psychosocial environment includes the process of medical assessment. Assessors can skew claimants’ attitudes positively or negatively depending on how they discuss their findings. For example, there is a difference between being told you are ‘10% disabled’ and being told that you are ‘90% able’. The focus should be on encouraging claimants to return to normal activities; choice of words and attitudes shown at assessment will influence this.

The group believed that further research needed to be undertaken to identify models for compensation used in other jurisdictions. They mentioned in particular:

- ◆ Singapore system (life long account)
- ◆ mutual insurance schemes, such as that used in California, emphasising settlement and early return to work.

The group suggested that the assessment process needed to be clearer and simpler.

## Plenary session

In the plenary session, participants agreed with the small group conclusions. The issue was also raised that consumers have a problem of finding a job after having a claim, as employers don't want to take on the liability; options for solutions include co-insurance and a formal letter saying the employee will not make a claim. This requires co-operation between insurers.

## Medical assessments

### Perspectives paper

The perspectives papers noted:

- ◆ the assessing doctor is a 'gatekeeper' but has no on-going relationship with the patient (this is not necessarily negative)
- ◆ doctors find the adversarial system time consuming and tedious
- ◆ 'doctor shopping' by claimants introduces bias and inaccuracy
- ◆ the system values 'box-ticking' at the expense of objective assessment of injury.

(Dr Dowda, Ms O'Reilly).

### Participants' conclusions and suggestions for improvement (Medical assessment group)

The group which looked at medical assessment issues noted that:

- ◆ There is a need to differentiate the people treating and those assessing. Assessors need to be independent and trained in impairment/disability assessment and need to be accredited.
- ◆ Assessors are not there to advocate for the patient in the system.
- ◆ Standard medical examinations and standard medical reports need to be adopted by the medical profession.

## Plenary session

The seminar gave in principle support to the small group recommendations but was concerned that there was a lack of scientific validity to the assessment process (particularly using guidelines) and that the development of guidelines was affected by political considerations.

The issue of ethics was raised: is it unethical to use an assessment system known to be flawed (even if required to do so by legislation), particularly if, as some suggested, the guidelines are affected by the needs of the insurers instead of being scientifically based? Several participants responded that without a better alternative, current guidelines had to be used.

The seminar agreed there was a need to develop comprehensive Australian guidelines. If guidelines must be nominated in legislation, the act should specify the 'most recent version' of those guidelines, rather than naming a particular edition which would soon be out of date.

Suggestions for training and accreditation included:

- ◆ inclusive (i.e. non-medics) and multi-disciplinary (for example, allied health professionals)
- ◆ accreditation should be provided by local add-on modules, peer-reviewed for content
- ◆ training should include consumer experience.

The next steps were to involve others, particularly consumers, and to seek funding for the development of the guidelines.

## Medical management

### Perspectives papers

The perspectives papers raised the following issues:

- ◆ Doctors (especially treating doctors) have a conflict between independence/objectivity and their patients' expectations that they will be advocates. Their own inclinations lead them towards the advocate's role.
- ◆ Undergraduate medical training lacks preparation for dealing with compensation cases. Continuing medical education (CME) is addressing this but not fully.
- ◆ There is fragmentation and duplication of care for claimants.
- ◆ However, quality of care for musculo-skeletal injuries is rising as a consequence of evidence-based practice and dissemination of research.
- ◆ There may be conflicts between the treating doctor and expert advice. (For example, it is difficult for a treating doctor to say, 'there's nothing I can do to help, just go home and get on with your life', which may be the best advice as recommended by experts for some injuries.)
- ◆ The potential for future litigation leads to over-cautious clinical management.

(Dr Dowda, Ms Tito, Ms Mackenzie, comments from floor).

Subsequent to the draft of this report being circulated, Dr Michael Nicholas and Dr Allan Molloy commented that, since identification and management of psychosocial risk factors have been identified in research as critical, little acknowledgment is given that treating doctors may have limitations in their ability to deal appropriately with patients who have high-risk psycho-social factors. Assessment and management of such patients should be undertaken by appropriately qualified and experienced psychologists or psychiatrists, and management of those at high risk of long-term disability should be managed by appropriate multi-disciplinary teams (such as those in pain management centres) or by a co-ordinated, interdisciplinary approach that emphasises communication between all health professionals working with the patient. There are, however, few incentives in the current system to use a multi-disciplinary approach and several obstacles to doing so, not least insurers' perception of cost-effectiveness and treating doctors' inability or unwillingness to liaise with allied health professionals.

### Participants' conclusions and suggestions for improvement (Medical management group)

The small group which looked at medical management of injuries made the following points:

- ◆ Medical management is primarily a medical education issue. The group noted that good courses were already available at Flinders and Otago (AFMM) in musculo-skeletal medicine. The need was for dissemination of already existing information.
- ◆ Musculo-skeletal medicine, pain and disability medicines have overlapping interests and all are (and must be) involved in this process.
- ◆ Need for education to be based on evidence-based medicine (EBM) and best clinical practice.
- ◆ Need for incentives to get treating doctors to do the courses.
- ◆ There is currently poor communication between GPs and other players in the health and insurance industries.
- ◆ Psycho-social factors, non-medical, environmental, etc. are crucial in determining outcomes.
- ◆ Need to fill gaps in EBM regarding treatment of some injuries.
- ◆ GPs could not be expected to solve systems issues through education and information.

### Plenary session

The seminar participants endorsed the need for EBM to be the basis of any medical education or campaign for better management.

Professor Bogduk made the point that treatment for acute and chronic conditions is quite different and should be treated as such in any education campaign. Again, the point was made that EBM knowledge of appropriate treatment for many common compensable conditions (for example, whiplash) is available, but that treating doctors and others are not 'up to speed' on this.

It was noted that there are vested interests in medical education which may affect implementation of any training.

An alternative to widespread education of GPs was presented by Hugh Dickson, who suggested that there is scope to direct cases to people with the skills required as is done with emergency units. In this model, each region would have GPs or Accident and



Emergency centres with special expertise in disability management, and a protocol for immediate referral would ensure timely and appropriate treatment. Seminar participants were divided in their support of this concept, but agreed it was worth investigating.

One participant noted that prevention was a better option than any treatment model, and suggested that the compensation system absolved employers of the need to prevent injury in the first place. While others pointed out that the effort toward prevention had significantly increased, with real decreases in injury rates in workplaces over the past decade, it was agreed that more effort in prevention was needed.

## Medical testimony

### Perspectives papers

The following points were made in the perspectives papers:

- ◆ A main issue is that of the ‘hired gun’ and expert witness shopping by both plaintiff and defendant lawyers. ‘Expert’ witnesses are not only sometimes biased, but may not be, in fact ‘expert’.
- ◆ The adversarial process is not the best forum for understanding and consensus. It may limit the evidence presented.
- ◆ The quality of evidence varies – judges need to understand the difference between high-quality epidemiological studies and individual opinions or low quality case series. This may require training of judges.

(Ms Linden, Ms O’Reilly & Dr Dowda).

### Participants’ conclusions and suggestions for improvement (Medical testimony group)

This group endorsed the need to adapt the Federal Court guidelines on the use of expert witnesses, but suggested that they be adapted to match the US model. In the USA, evidence must be consistent with published evidence [EBM], and medical opinion unsupported by evidence is no longer accepted as proof. The group noted that the Australian guidelines are fine for etiquette and behaviour but fall short of securing high quality expert evidence.

The group agreed with the perspectives paper on the need to educate judges in medical testimony, particularly in what constitutes evidence in the scientific model.

They noted, following from this, that there is a fundamental difference between medical and legal models of evidence and standards of proof. This leads to gaps in understanding between lawyers, judges and doctors.

The group presented a model for the use of expert testimony within the adversarial system. They suggested that a panel of experts should be brought together for court cases: two from each side who had examined or treated the person, one from each side who had not. The panel would meet before the case and prepare written materials for the court, identifying where they agreed and where and why they did not. A range of agreement was possible: unanimous view, consensus, majority & dissenting minority, polarised views/unreconcilable.

### Plenary session

The seminar noted that the panel idea presented by the group did not address either the issues of multiple medical assessments putting a strain on claimants, or the problem of hired gun experts.

Discussion in the plenary session also threw up possibilities of blinded referral to medical assessors, and processes of selection for panels to ensure impartiality. No conclusions were reached with regard to these matters.

The Law Society noted its opposition to anything removing the adversarial system for witnesses.

## Legal management

### Perspectives papers

The following points were made in the perspectives papers:

- ◆ court delays lead to illness behaviours becoming entrenched (Ms Linden, Dr Dowda)
- ◆ availability of structured settlements as well as lump sum would assist claimants after settlement, but these are currently not economic for claimants under Australian taxation law
- ◆ the problem of ‘hired guns’, as noted above
- ◆ the legal imperative of maximising the value of the claim may work against rehabilitation and return to work.

(Ms O’Reilly, Ms Linden, Dr Dowda).

---

<sup>5</sup> Mr Paul Mulvany, Plaintiff Lawyers Association.

## Participants' conclusions and suggestions for improvement (Legal management group)

The group agreed with Ms Linden's point regarding the differences in concepts and language used by legal and medical practitioners (particularly as regards the term 'evidence'), and suggested:

- ◆ Training and re-education is needed for all parties to ensure they speak the same language, and this should include:
  - roles/duties
  - process
  - evidential standards
- ◆ There is a need to accredit expert witnesses. There was not full agreement on accreditation of practitioners, but there was on the need to accredit assessors.
- ◆ There is a need to upgrade/improve dispute resolution processes. Mediation is better than the adversarial court process. However, all players need to be committed to the mediation for it to work. There is a need for more data on how successful mediation is, and what types of mediation or ADR work best for compensation cases.
- ◆ Financial incentives to encourage recovery and return to work or normal activities should be built into the compensation system. At present the system appears to reward not recovering.
- ◆ No one type of legal and medical management is appropriate for all injuries. Different types of injury need to be looked at differently (for example, catastrophic injury vs soft tissue injury).
- ◆ There is a need for high-level dialogue between medical and legal bodies to discuss where the system works and where it doesn't. This could be part of the process referred to earlier, of improving cultural and linguistic understanding between the two groups.

## Plenary session

The session endorsed the groups' conclusions. However, the Insurance Council of Australia representative noted there are in fact two systems: the ordinary claims processing and payments run by the insurers, and the medico-legal process following a dispute. It was agreed that any research or improvements to 'the system' should acknowledge this and not concentrate solely on the medico-legal process following a dispute.

The Law Society and the Plaintiff Lawyers Association of Australia stated that the adversarial system has benefits for claimants and they were opposed to any changes that removed the opportunity for expert witnesses to be presented by both sides, or for cross-examination. In comments upon the draft of this report, the Plaintiff Lawyers Association representative registered concern about the 'purported "encouragement from plaintiff's lawyers" for injured claimants to remain inactive and symptomatic', suggesting that this only occurs in 'rare isolated cases' while 'the overwhelming majority is to the contrary... most plaintiff lawyers understand and accept that the best security that can be obtained for an injured person is a speedy return to appropriate employment... structural factors such as the attitudes of employers and general discrimination are far more important factors in the maintenance of disability.'<sup>5</sup>

## Changing the system

### Perspectives papers

The perspectives papers noted that the current schemes have the wrong incentives:

- ◆ Claimants are encouraged to be sick
- ◆ Medical over-servicing and legal intervention bring rewards to medical and legal practitioners. No-one has the right incentive for the best outcome for the injured person
- ◆ The system is process driven not outcome driven and currently all approaches are legislatively based and over complex
- ◆ Dispute resolution systems are inadequate
- ◆ There are poor communication systems between stakeholders (employer, employee, treating doctor, insurer)
- ◆ The system does not have incentives or resources for evidence-based medicine and there is a lack of hard data
- ◆ The adversarial nature of the scheme diverts funds from claimants to medico-legal industry.

(Ms Mackenzie and Ms O'Reilly).

---

<sup>5</sup> Mr Paul Mulvany, Plaintiff Lawyers Association.

The group decided not to discuss the possibility of a no-fault system, since participants believed there was little likelihood of such a system being adopted in Australia, especially since a complete no-fault system (as operates in New Zealand) may also have poor health outcomes according to present evidence.

It noted some evidence for improved outcomes if non-economic loss (pain and suffering) payments were reduced or removed. The recent amendments to the Motor Accidents Act in NSW reduced non-economic loss payments, making them available only to claimants who had suffered whole person impairment over a set threshold (10%). The MAA representative cited early evidence that whiplash claims had dropped since the amendment, and that the MAA was commissioning a long-term (3-4 year) study to determine the effects of the amendment on claimant outcomes.

Group members stated that the original basis of compensation systems pre-dated the welfare system and were intended to make sure that injured workers did not starve. The current system exceeds this and has significantly shifted its goals.

Group members were united in their concern about the ambiguity currently operating in the terms 'disability' and 'impairment'. Although the group accepted the World Health Organization definitions, group members believed that there was considerable confusion about these terms amongst treating doctors, assessors, legal practitioners and judges, that the assessment system, which is designed to assess impairment, is in practice used to assess disability, and that it does so badly.

The group supported mediation rather than an adversarial system. It discussed the NSW MAA system for dispute resolution, which requires medical assessments to be performed by an independent assessor chosen from an eligibility list held by the MAA but approved by both parties. It was noted that selection criteria and vetting of assessors on the list was vital, as was proper levels of remuneration to ensure the quality of assessors.

The group suggested that:

- ◆ Early intervention for at risk cases was crucial in preventing long-term disability.
- ◆ Insurers need to improve case management processes by flagging potential problems and referring them to treating doctors for medical management.
- ◆ Need for performance standards for insurers, treating doctors and rehabilitation providers, with performance indicators including claimant health outcome measures.
- ◆ Need to research and evaluate early intervention once potential problem is flagged.
- ◆ Medical practitioners must also improve case management and should be more active in 'managing the system'.

## Plenary session

Plenary discussion ranged widely.

The question was raised as to why the group discounted a no fault system. Scheme designs discussed included:

- ◆ Fault/no-fault.
- ◆ Lump sum/structured settlements/no lump sum (no NEL). It was noted that lobbying and representation to the ATO has occurred, with the ATO promising a response, but the situation seems to have stalled.
- ◆ Changing the delivery mechanism for giving money to claimants.
- ◆ Variations on who runs the scheme (i.e. government vs private).

The seminar participants were broadly in agreement that more research into options regarding systems was needed.

Some doctors suggested that the medical system is being dominated by insurance system trying to curtail costs; need to examine separation between business of insurance and health care. The idea that medicine was dominated by insurance was rejected by some parties.

Other points included:

- ◆ Differences in schemes existed between the States, allowing the opportunity to compare outcomes in different jurisdictions.
- ◆ There was a lack of exchange of information between insurers and others, including treating doctors and lawyers.
- ◆ Research was not likely to originate in the academic sector since academics are already competing for limited research dollars. Funding for research in this area needs to be funded by organisations such as insurers and government authorities.

One participant suggested that compensation be abolished and replaced with needs-based health care.

The Insurance Council of Australia representative noted that compensation systems were set up simply to pay money. Their role and goals have changed towards prevention and rehabilitation, but insurers and legal processes have not shifted fully to match this. There is a need to restructure so that process and goals are aligned.

## Summary of seminar conclusions

This section summarises the suggestions made by groups and seminar participants in the plenary session.

The following needs were identified:

### Consumers

- ◆ Information for consumers.

### Medical

- ◆ Treatment based on evidence based medicine (EBM).
- ◆ Improvements in medical case managements by treating doctors (tied to education).
- ◆ Recognition of the importance of psychosocial factors in treatment, assessment and case management of injured persons.
- ◆ Improvement in managing people at high risk of developing long-term disability, especially in helping them to return to normal activities.
- ◆ Improvement in management of people with chronic pain, so that where ‘red flag’ conditions have been excluded, these people are helped to resume more normal activities despite their pain.
- ◆ Improvement in assessment process to make it simpler and clearer.
- ◆ Assessors and treating doctors should be differentiated, with assessors being trained and accredited in impairment/disability assessments. Accreditation necessary for an assessor to appear as an expert witness.
- ◆ Development of nationally accepted assessment and treatment guidelines.
- ◆ Education based on EBM for undergraduates, treating doctors and other relevant health care providers in appropriate treatment and case management of typical compensation cases (musculo-skeletal and pain medicine).
- ◆ Education courses must have incentives to encourage doctors to attend.

### Legal

- ◆ Revision of Federal Court guidelines on the use of expert witnesses and adoption by all jurisdictions. Guidelines to emphasise testimony based on accepted scientific standards of evidence.
- ◆ Education of judges in medical testimony, particularly in what constitutes evidence in the scientific model.

### Insurers

- ◆ Systemic change to include: revision of incentives to encourage recovery and return to work or normal activity. This change to occur at both insurer system level and post-dispute.
- ◆ Development of case management processes so that insurers can identify at risk individuals and refer them for early intervention via appropriate medical management. This would include performance standards for insurers, doctors and rehabilitation providers, with performance indicators including claimant health outcome measures.
- ◆ Improvement of alternative dispute resolution processes, both within insurance companies and through the courts.

### Multi-disciplinary

- ◆ Continuing stakeholder interaction and information sharing.
- ◆ Improved communication between stakeholders/players (i.e. injured person, doctors, insurers, lawyers, employers).
- ◆ Training for both lawyers and doctors including roles and duties, process and evidential standards.
- ◆ Ongoing high level dialogue between representative medical and legal bodies and relevant Government authorities.
- ◆ Clarification amongst stakeholders of the terms ‘impairment’ and ‘disability’.

## Research

The following research questions were also raised:

- ◆ Have rates in assignment of permanent disability risen?
- ◆ What percentage of cases involve chronic pain from non-specific musculo-skeletal causes (e.g. whiplash, non-specific low back pain [NSLBP])?
- ◆ Can we determine the best option for consumer health, by comparison of existing compensation schemes and their outcomes?
- ◆ What gaps in EBM regarding treatment of certain injuries exist?
- ◆ Which alternative dispute resolution (ADR) or mediation approaches work best for compensation matters?
- ◆ What are effective early intervention measures for at risk claimants?
- ◆ What percentage of cases are settled?
- ◆ Given the importance of psychosocial factors in neck and back pain, what factors are perceived by claimants to have most contributed to stress during the claims process?

## Recommendations

In the final session of the seminar, it was agreed that on-going dialogue and information-sharing between representative bodies be established, to be co-ordinated through The Australasian Faculty of Occupational Medicine for the Committee of Presidents of Medical Colleges (CPMC).

The following bodies indicated interest in continuing to be involved: WorkCover NSW, NRMA, Australian Plaintiff Lawyers Association, the Bar Association, College members of the CPMC, The Australasian Faculty of Musculo-skeletal Medicine, the Australian Psychological Society, the Motor Accidents Authority of NSW, the Australian Physiotherapists Association, the Department of Veterans' Affairs, the Department of Family & Community Services and the Insurance Council of Australia.

There were areas for further actions agreed upon at the seminar. These have been couched here as recommendations.

### 1. Consumer issues

Develop a consumer information strategy. This should take into account:

- ◆ the potential to deliver better information to claimants or potential claimants at an early stage via the insurance processes and/or medical and health providers
- ◆ emerging trend of developing consumer materials to complement clinical guidelines
- ◆ information for consumers based on research on financial outcomes of compensation cases to ensure expectations are realistic
- ◆ opportunities to explore exchange of information between experienced, and often disillusioned claimants, and new claimants.

### 2. Medical education

Develop a medical education strategy for undergraduates and practitioners, particularly GPs. This should have as its focus:

- ◆ the compensation system - the medical role in the process and potential negative effects on health outcomes
- ◆ best practice treatment for commonly occurring conditions.

### 3. Medical assessment

Develop/adopt national guidelines for assessment of impairment and disability.

In recognition of the fact that those guidelines currently available are less than perfect and depend on consensus views rather than a scientific basis, undertake on-going research to improve the quality of the guidelines progressively.

### 4. Medical testimony

Review progressive USA guidelines on medical evidence with a view to their introduction in Australia.

Recognise that the understanding of medical evidence in medicine and law are very different. Create a multi-disciplinary forum for on-going dialogue on this subject.

## 5. Areas for future research

Develop a research strategy with the aims of:

- ◆ identifying key features of compensation design which are likely to impact on health outcomes
- ◆ determining impacts on health outcomes
- ◆ developing options for scheme design which optimise health outcomes and are cost effective.

### Summary

Although most people who have compensable injuries recover well, a greater percentage of these people have poorer health outcomes than do those with similar but non-compensable injuries. There is sufficient good quality evidence to show this to be true, and significant agreement among practitioners in all relevant fields (medical, legal, insurance, government oversight bodies) to support the evidence and to suggest that a complex interaction of factors is responsible for this.

However, research into causes of poor outcomes for these people is fragmentary and inconclusive.

Not enough is known of the effects of different types of compensation schemes or different methods of management of cases (by all practitioners involved) to allow the development of a 'best practice' model.

Any attempt to 'reform' the compensation system(s) must be informed by further rigorous research.

However, the research does clearly indicate the importance of psychosocial factors in long-term disability and recent evidence suggests that appropriate early medical intervention that takes this into account can significantly reduce chronicity and long-term disability. Such intervention should ideally be a co-ordinated interdisciplinary effort (for example, medical, psychological and physiotherapy) to provide interventions that address as many levels of the case as possible.

It is also generally agreed amongst representatives from the medical colleges that the quality of management of the most common types of compensable injuries (non-specific low back pain, 'whiplash' and other soft tissue injuries) should be improved.

Amongst the legal fraternity involved with the civil justice system, a great deal of reform and consideration of reform is currently underway. This is an international movement. Some of the areas of consideration include the management of expert testimony, more active case management by judges and the effect of the adversarial system in civil matters.

Practitioners in all fields are concerned about the ill effects experienced by their clients. Co-operation between professions is crucial to the development and implementation of workable solutions to the problems outlined in this report.

# Bibliography

---

- ALSTON B. 'Work in progress: the adversarial inquiry,' *Reform*, Issue 73, 1998, pp. 35-37.
- ATLAS SJ, CHANG Y, KAMMANN E, *et al.* 'Long-term disability and return to work among patients who have a herniated lumbar disc: the effect of disability compensation,' *Journal of Bone and Joint Surgery - American*, Vol. 82-A (1), January 2000, pp. 4-15.
- AUSTRALIAN LAW REFORM COMMISSION. *Managing Justice: A review of the federal civil justice system*, Report No. 89, January 2000, ALRC, Canberra.
- BAER N. 'Disability payments continue to climb: "Tell us what you see, not what you think," CPP tells MDs,' *Canadian Medical Association Journal*, Vol. 156, No. 1, 1 January 1997, pp. 61-64.
- BAKER B. 'New project will provide a link between scientists and the judiciary,' *Bioscience*, Washington, Vol. 49, No. 10, October 1999, p. 764.
- BINDER LM, ROHLING ML. 'Money Matters: A Meta-Analytic Review of the Effects of Financial Incentives on Recovery After Closed-Head Injury,' *American Journal of Psychiatry*, Vol. 153, No. 1, January 1996, pp. 7-10.
- BLACK, MEJ, Chief Justice. *Guidelines for Expert Witnesses in Proceedings in the Federal Court of Australia*, 1999.
- BLACKMORE K. 'Law Medicine and the Compensation Debate: Part 1' *Journal of Occupational Health & Safety - Aust NZ*, Vol. 9, No. 1, 1993, pp. 59-63.
- BLACKMORE K. 'Law Medicine and the Compensation Debate: Part 2' *Journal of Occupational Health & Safety - Aust NZ*, Vol. 9, No. 2, 1993, pp. 147-151.
- BRAND RA, LETHMANN TR. 'Low-back impairment rating practices of orthopaedic surgeons,' *Spine*, Vol. 8, No. 1, Jan-Feb 1983, pp. 75-78.
- BRENA SF, CHAPMAN SL, STEGALL PG, *et al.* 'Chronic pain states: their relationship to impairment and disability,' *Arch Phys Med Rehabil*, Vol. 60, No. 9, Sept 1979, pp. 387-389.
- BREWER M. 'Looking west,' *Reform*, Issue 73, 1998, pp. 56-57.
- BRIDGE R. 'Workers Comp,' *Australian Safety News*, August 1997, pp. 37-45.
- BROWNE-WILKINSON N. 'The UK Access to Justice Report: A Sheep in Woolf's Clothing,' *Western Australian Law Review*, Vol. 28, July 1999, pp. 181-191.
- BRYANT M. 'Expert witnesses: Thinking inside the box,' *Reform*, Issue 73, 1998, pp 38-40.
- CAMERON SJ. 'Workers' compensation - what role the doctor?' *Medical Journal of Australia*, Vol. 164, 1 Jan 1996, pp. 26-27
- CAMPBELL NI, VALE A. 'Encouraging more effective use of court-appointed experts and technical advisors,' *Defense Council Journal*, Chicago, Vol 67, No. 2, April 2000, pp. 196-208.
- CANADIAN MEDICAL ASSOCIATION. 'The physician's role in helping patients return to work after an illness or injury,' *Canadian Medical Association Journal*, Vol. 156, 1997, pp. 680A-680C.
- CASSIDY DJ, CARROLL LJ, COTE P, *et al.* 'Effect of Eliminating Compensation for Pain and Suffering on the Outcome of Insurance Claims for Whiplash Injury,' *New England Journal of Medicine*, Vol. 342, No. 16, Apr 20, 2000, pp. 1179-1186.
- CHEADLE A, FRANKLIN G, WOLFHAGEN C, *et al.* 'Factors influencing the duration of work-related disability: a population-based study of Washington State workers' compensation,' *American Journal of Public Health*, Vol. 84, 1994, pp. 190-196.
- CHRISTIE E. 'The Role of Law and Science in the Resolution of Disputes over Factual Evidence,' *Environmental and Planning Law Journal*, September, 1991, pp. 200-209.
- CLELAND LG. 'Medico-legal Iatrogenesis: A Kafkaesque Analysis,' *Adelaide Law Review*, Vol. 12, 1989, pp. 226-229.
- COHEN EJ. 'Don't take experts from strangers,' *ABA Journal*, Chicago, Vol 86, Apr 2000, p. 74.
- COHEN ML, NICHOLAS MK, BLANCH, AW. 'Medical assessment and management of work-related low back or neck-arm pain: more questions than answers,' *Journal of Occupational Health & Safety - Aust NZ* 2000, Vol. 16, No. 4, pp. 307-317.
- COLLINS RB, KRIZNER WT. 'Expert medical testimony: Is there an answer to "not only relevant, but reliable"?' *Defense Counsel Journal*, Chicago, Vol 66, No. 3, Jul 1999, pp. 384-390.
- COOPER RE. 'Federal Court expert usage guidelines,' *Australian Bar Review*, Vol. 16 No. 3, February 1998, pp. 203-221.
- CREIGHTON A. 'An adversarial system: a constitutional requirement,' *Reform*, Issue 74, 1999, pp. 65-67.
- CRONIN K. 'Digging for data: the adversarial inquiry,' *Reform*, Issue 72, 1998, pp. 34-37.



DAKIN H. 'Work in progress: the adversarial inquiry,' *Reform*, Issue 73, 1998, pp. 58-60.

DEYO RA. 'Pain and Public Policy: Editorial,' *New England Journal of Medicine*, Vol. 342, No. 16, April 20, 2000, pp. 1211-1212.

DONALD K, BORDUJENKO A. 'Is it time to limit the role of the judiciary in compensation matters?' *Australian and New Zealand Journal of Public Health*, Vol. 23, No. 3, Jun 1999, pp. 328-330.

ELKINGTON KJ. 'Legal Aspects of Disability Claims,' *AJJ Journal*, November, 1985, pp. 2-5.

ELLIS N. *Work and health management in Australia and New Zealand*, Oxford University Press, Sydney (in preparation, expected publication, 2001)

FRANK J, SINCLAIR S, HOGG-JOHNSON S, *et al.* 'Preventing Disability from work-related low-back pain: New evidence gives new hope - if we can just get all the players onside,' *Canadian Medical Association Journal*, Vol. 158, No. 12, June 16, 1998, pp. 1625-1631.

FRASER RD. 'Compensation and recovery from injury: editorial,' *Medical Journal of Australia*, Vol. 165, July 1996, pp. 71-72.

FREEMAN MD, CROFT AC, ROSSINGOL AM. "Whiplash Associated Disorders: Redefining Whiplash and Its Management," by the Quebec Task Force: A Critical Evaluation,' *Spine*, Vol. 23, No. 9, May 1998, pp. 1043-1049.

FRISTON M. 'New rules for expert witnesses: The last shots of the medicolegal hired gun,' *British Medical Journal*, Vol. 318, Issue 7195, May 22, 1999, pp. 1365-1366.

GABEL JTA, MANSFIELD NR, KLEIN RW. 'The new relationship between injured worker and employer: An opportunity to restructure the system,' *American Business Law Journal*, Vol. 35, No. 3, Spring 1998, pp. 403-442.

GARDNER J. 'The Victorian WorkCare Appeals Board - An Investigatory Model,' *Torts Law Journal*, Vol. 1, No. 2, July 1993, pp. 154-168.

GLEESON M. 'Access to Justice - A New South Wales Perspective,' *Western Australian Law Review*, Vol. 28, July 1999, pp.192-198.

GLOSS DS, WARDLE MG. 'Reliability and validity of American Medical Association's guide to ratings of permanent impairment,' *JAMA*, Vol. 248, No. 18, Nov 1992, pp. 2292-2296.

GOLDNEY RD. 'Elucidation of psychological factors in compensable injury,' *Medical Journal of Australia*, Sept 29, 1984, 433-436.

GREENOUGH CG, FRASER, RD. 'The effects of compensation on recovery from low-back injury,' *Spine*, Vol. 14, No. 9, 1989, pp. 947-955.

GREENWOOD JG. 'Low-back impairment-rating practices of orthopaedic surgeons and neurosurgeons in West Virginia,' *Spine*, Vol. 10, No. 8, Oct 1985, pp. 773-776.

GRIBICH C, McGARTLAND M, POLGAR S. 'Regulating workers' compensation: the medicolegal evaluation of injured workers in Victoria,' *Australian Journal of Social Issues*, Vol. 33, No. 3, August, 1998, pp. 241-263.

HADLER NM. 'If You Have to Prove You Are Ill, You Can't Get Well: The Object Lesson of Fibromyalgia,' *Spine*, Vol. 21 (20), 15 October 1996, pp. 2397-2400.

HADLER NM. 'The Disabled, the Disallowed, the Disaffected and the Disavowed,' *Journal of Occupational and Environmental Medicine*, Vol. 38, No. 3, March 1996, pp. 247-251.

HADLER NM, CAREY TS, GARRETT J & THE NORTH CAROLINA PAIN PROJECT. 'The Influence of Indemnification by Workers' Compensation Insurance on Recovery from Acute Backache,' *Spine*, Vol. 20, No. 24, pp. 2710-2715.

HEADS OF WORKERS' COMPENSATION AUTHORITIES. "Comparison of Workers' Compensation Arrangements in Australian Jurisdictions, January 2000". Department of Employment, Workplace Relations & Small Business, Canberra.

HELFENSTEIN M, FELDMAN D. 'The Pervasiveness of the Illness Suffered by Workers Seeking Compensation for Disabling Arm Pain,' *Journal of Occupational and Environmental Medicine*, Vol. 42, No. 2, February 2000, pp. 171-175.

HENDERSON JB, GRAMS D, PRESTI D. 'How "reliable" should a physician's diagnosis be?,' *National Law Journal*, New York, Vol. 22, Issue 40, May 29, 2000, pp. B18-B19.

HIRSCH BT. 'Incentive Effects of Workers' compensation,' *Clinical Orthopaedics and Related Research*, Vol. 336, March 1997, pp. 33-41.

IPP, DA. 'Reforms to the Adversarial Civil Litigation' Part 1 *Aust. Law Journal* Vol. 69, Sept 1995

JACKSON T, IEZZI A, LAFRENIERE K. 'The Impact of Psychosocial Features of Employment Status on Emotional Distress in Chronic Pain and Health Comparison Samples,' *Journal of Behavioural Medicine*, Vol. 20, No. 3, June 1997, pp. 241-256.

KAISER J. 'Project offers judges neutral science advice,' *Science*, Vol. 284, Issue 5420, Jun 4, 1999, pp. 1600.

- KIERNAN V. 'Project will supply "independent" experts for suits involving scientific issues,' *The Chronicle of Higher Education*, Washington, Jun 11, 1999.
- LEITNER PR, SPEEK WM, HOWARD LY. 'What to consider in determining disability?', *Defense Counsel Journal*, Chicago, Vol. 67, No. 2, Apr 2000, pp. 254-257.
- LINTON J, ANDERSSON T. 'Can Chronic Disability Be Prevented?: A Randomized Trial of a Cognitive-Behaviour Intervention and Two Forms of Information for Patients with Spinal Pain,' *Spine*, Vol. 25, No. 21, 1 November 2000, pp. 2825-2831.
- LOEDING BK, GREENAN JP. 'Reliability and validity of generalizable skills instruments for students who are deaf, blind, or visually impaired,' *Am Ann Deaf*, Vol. 143, No. 5, Dec, 1998, pp. 392-403.
- LOWERY WD Jr, HORN TJ, BODEN SD, *et al.* 'Impairment evaluation based on spinal range of motion in normal subjects,' *Journal of Spinal Disorders*, Vol. 5, No. 4, Dec 1992, pp. 398-402.
- McCARTHY ML, McANDREW MP, MacKENZIE EJ, *et al.* 'Correlation between the measures of impairment, according to the modified system of the American Medical Association, and function,' *J Bone Joint Surg Am*, Vol. 80, Jul 1998, pp. 1034-1042.
- McNAUGHTON HK, SIMS A, TAYLOR WJ. 'Prognosis for people with Back pain Under a No-Fault 24-Hour-Cover Compensation Scheme,' *Spine*, Vol. 25, No. 10, 2000, pp. 1254-1258.
- MARK S. 'Improving the Outcome of the Individual - the role of the professional and the political process'. Paper presented to the Forum on Compensable Injuries and Health Outcomes 2000.
- MAYOU R. 'Accident Neurosis Revisited,' *British Journal of Psychiatry*, Vol. 168, No. 4, April, 1996, pp. 399-403.
- MENDELSON G. 'Occupational stress Part 3: medico-legal aspects,' *Journal of Occupational Health & Safety - Aust/NZ*, Vol. 6, No. 3, 1990, pp. 189-197.
- MILLER H. 'Accident Neurosis' *BMJ* pp. 919-998, 1961.
- MOLLOY AR, BLYTH FM, NICHOLAS MK. 'Disability and work-related injury: time for a change?' *Medical Journal of Australia*, Vol. 170, 15 Feb 1999, pp. 150-151.
- MOTOR ACCIDENTS AUTHORITY OF NSW. Whiplash and the NSW Motor Accidents Scheme Statistical Information paper Number 7, March 1999, Motor Accidents Authority of NSW, Sydney.
- MOTOR ACCIDENTS AUTHORITY OF NSW. June '99 CTP Statistics, November 1999, Motor Accidents Authority of NSW, Sydney.
- NATTRASS CL, NITSCHKE JE, DISLER PB, *et al.* 'Lumbar spine range of motion as a measure of physical and functional impairment: an investigation of validity,' *Clinical Rehabilitation*, Vol. 13, No. 3, Jun, 1999, pp. 211-218.
- NIALL P. 'Critique of Assessment Systems,' Paper given to the Australasian Faculty of Occupational Medicine at the Annual Scientific Conference of the Royal Australasian College of Physicians, Canberra, May 1996.
- NICHOLAS M, MOLLOY A, TONKIN L, *et al.* *Manage Your Pain: practical and positive ways of adapting to chronic pain*, ABC Books, Sydney, 2000.
- NICHOLAS, M. 'Limiting longevity cases through better injury management,' Conference paper: Streamlining Personal Injury Management, December 1, 2000, Sydney.
- NITSCHKE JE, NATTRASS CL, DISLER PB, *et al.* 'Reliability of the American Medical Association guides' model for measuring spinal range of motion. Its implication for whole-person impairment rating,' *Spine*, Vol. 24, No. 3, Feb 1, 1999, pp. 262-268.
- OSBORNE D, MEIKLE V. 'An exploration of awareness and attitudes towards the current NSW CTP scheme and its potential alternatives,' Woolcott Research conducted for the NSW Motor Accidents Authority, Sydney, November 1998.
- PRENDERGRACS D. 'Expert witness', *Canadian Insurance*, Toronto, Vol. 105, No. 5, May 2000, pp. 18-21.
- PURDY J. 'Review of the Civil and Criminal Justice System' The Law Reform Commission of W.A. June 1999 [www.wa.gov.au/lrc](http://www.wa.gov.au/lrc)
- QUEENSLAND MOTOR ACCIDENT 'INSURANCE ACT 1994'.
- RAINVILLE J, SOBEL JB, HARTIGAN C, *et al.* 'The Effect of Compensation Involvement on the Reporting of Pain and Disability by Patients Referred for Rehabilitation of Chronic Low Back Pain,' *Spine*, Vol. 22, No. 17, 1997, pp. 2016-2024.
- RONDINELLI RD, KATZ RT. *Impairment Rating and Disability Evaluation*, WB Saunders Company, Philadelphia, 2000.
- THE ROYAL AUSTRALASIAN COLLEGE OF PHYSICIANS. Health Policy Unit. *For richer, for poorer, in sickness and in health: The Socio-Economic Determinants of Health*, 3rd edition, Sydney, 1999.
- ROSE J. 'How jurors perceive expert witnesses,' *Trial*, Washington, Vol. 36, No. 6, Jun 2000, pp. 51-57.
- RUNKLE D. Manager, Case Project USA. Personal Communication 2000.

- RUTKIN AS. 'Reining in the experts,' *Best's Review*, Oldwick, Aug 1999, Vol 100, No. 4, pp. 99-100.
- SALCEDO-WASICEK M, THIRLBY RC. 'Postoperative Course After Inguinal Herniorrhaphy: A Case-Controlled Comparison of Patients Receiving Workers' Compensation vs Patients with Commercial Insurance,' *Archives of Surgery*, Vol 130, No. 1, Jan 1995, pp. 29-32.
- SALLMANN PA, WRIGHT RT. *Going to Court: A Discussion Paper on Civil Justice in Victoria*, Department of Justice, Civil Justice Review Project, April 2000, Melbourne.
- SANDERSON PL, TODD BD, HOLT GR, *et al.* 'Compensation, Work Status and Disability in Low Back Pain Patients,' *Spine*, Vol. 20, No. 5, 1995, pp. 554-556.
- SCHRADER H, OBELIENIENE D, BOVIM G, *et al.* 'Natural evolution of late whiplash syndrome outside the medicolegal context,' *Lancet*, Vol. 347 1996, pp. 1207-1211.
- SCOTT R. 'Medico-Legal Reports - The Medico-Legal Society of Queensland Policy Statement,' *Queensland Law Society Journal*, October 1994, pp. 399-404.
- SHANAHAN EM, LE LEU L. 'The American Medical Association's "Guides to the Evaluation of Permanent Impairment",' *Journal of Occupational Health and Safety - Aust NZ*, Vol. 10, No. 4, pp. 323-329.
- SHEPPARD IF. 'The issue of the inquisitorial system of justice,' *Australian Journal of Forensic Sciences*, Vol. 31, 1999, pp. 19-28.
- SINCLAIR SJ, HOGG-JOHNSON S, CASSIDY JD, *et al.* 'The effectiveness of an early active intervention program for workers with soft-tissue injuries: the Early Claimant Cohort Study,' *Spine*, Vol. 22, 1997, pp. 2919-2931.
- SPEILER EA, BARTH PS, BURTON JF Jr, *et al.* 'Recommendations to guide revision of the Guides to the Evaluation of Permanent Impairment,' *Journal of the American Medical Association*, Vol 283, No. 4, pp. 519-523.
- SPRITZER WO, LE BLANC FE, DUPUIS M, *et al.* 'Scientific approach to the assessment and management of activity-related spinal disorders: a monograph for clinicians'. Report of the Quebec Taskforce on spinal disorders. *Spine*, 1987 Vol 12 (Suppl. 7) pp. 4-55.
- STOVNER LJ. 'The Nosologic Status of the Whiplash Syndrome: A Critical Review Based on a Methodological Approach,' *Spine*, Vol. 21, No. 23, December 1996, pp. 2735-2746.
- TAYLOR VM, DEYO RA, CIOL M, *et al.* 'Surgical Treatment of Patients with Back Problems Covered by Workers' compensation Versus Those with Other Sources of Payment,' *Spine*, Vol. 21, No. 19, pp. 2255-2259.
- THOMAS R. 'Compo,' *Australian OHS Magazine*, Feb 2000, pp. 10-13.
- TITO F. 'Compensation and disability - A Health Consumer Perspective'. Paper presented at the Forum on Compensable Injuries and Health Outcomes 2000
- TURK DC, OKIFUJI A. 'Perception of Traumatic Onset, Compensation Status and Physical Findings: Impact on Pain Severity, Emotional Distress, and Disability in Chronic pain Patients,' *Journal of Behavioural Medicine*, Vol. 19, No. 5, 1996, pp. 435-453.
- WADDELL G, McCULLOCH JA, KUMMEL E, *et al.* 'Nonorganic physical signs in low-back pain,' *Spine*, Vol. 5, 1980, pp. 117-125.
- WALSH NE, DUMITRU D. 'The Influence of Compensation on Recovery from Low back pain,' *Occupational Medicine: State of the Art Reviews*, Vol. 3, No. 1, January-March 1988, pp. 109-121.
- WILKINSON R, MARMOT M, (eds). *Social determinants of health: the solid facts*, World Health Organization, 1998.
- WINER CE, BOOTH GC, HENKE P, *et al.* 'Guide to the assessment of percentage "impairment" of the back, neck and pelvis,' *The Medical Journal of Australia*, Vol. 157, Sept 21, 1992, pp. 412-414.
- WOOLF. The Right Hon Lord. *Access to justice: final report to the Lord Chancellor on the civil justice system in England and Wales*, London, 1996 (accessed on web site [www.open.gov.uk/lcd/civil/reportfr.htm](http://www.open.gov.uk/lcd/civil/reportfr.htm))
- WORKCOVER NSW. 'Injury Management Initiatives, Workers Compensation that Works'. Internal Paper Sydney 1997
- YOUNG PW. 'Reforming the legal profession: again!' *Australian Law Journal*, Vol. 71, No. 8, August, 1997, pp. 577-579