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Compensation for medical injury in New Zealand: Does "no fault" increase uptake and reduce the social and clinical selectivity of claims?

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Compensation for medical injury in New Zealand: Does "no fault" increase uptake and reduce the social and clinical selectivity of claims?

Abstract

The issues of patient safety and the quality of care have gained increasing policy attention. While the focus is clearly on the *prevention* of iatrogenic injury, the question of patient *compensation* is now also on the policy agenda, if only because the fear of litigation may itself be a barrier to the disclosure and open discussion of medical error in tort systems. No-fault systems, by contrast, do not require proof of culpability. In principle this should have the merits, not only of encouraging error disclosure, but also of permitting higher and less selective uptake of claims for compensation. Little evidence however is available on the performance of such systems. This paper reports on the analysis of a sample of hospital admissions and a complete set of compensation claims for medical injury for the same year in one region of New Zealand, a country that has maintained a no-fault system of accident compensation for a quarter of a century. Just over two per cent of hospital admissions were associated with a compensable adverse event. Compared against the potential pool of claims, however, the ratio of claims to compensable events was only about 1:20. Comparison of social and clinical characteristics of the two data sets revealed a degree of selectivity. Compared with the hospital events, the typical successful claimant was younger and female, and was much more likely to have experienced a surgical adverse event that, while it was unexpected,

was not due to sub-standard care, and that resulted in a temporary and relatively minor disability. It is concluded that there are certain unique features to the New Zealand system such that a change in legal doctrine may not in itself be sufficient to remove completely the selective and low uptake traditionally associated with patient compensation under tort.

Introduction

The issue of iatrogenic injury has gained increasing policy attention . A combination of path-breaking epidemiological research (Brennan et al. 1991; Wilson et al. 1995; Thomas et al. 2000), the growth of the quality movement in health care (Brennan and Berwick 1996), and a number of spectacular regulatory failures,¹ has understandably focused the attention of policy makers and leaders in the health professions on question of patient safety and the prevention of iatrogenic injury (Kohn et al. 1999; Department of Health 2000

While the *prevention* of iatrogenic injury remains a proper, and long overdue, reorientation of priorities for research and policy at the level primarily of practice, the issue of patient *compensation* remains a salient one and raises broader questions about the regulatory framework. In particular, it brings into sharp relief the relative merits of tort and "no fault" legal jurisdictions (for a useful review of no-fault compensation for medical injury, see Bovbjerg and Sloan 1998). This is highlighted by the fact that, to date, the balance of the epidemiological research appears to call into question the effectiveness of tort litigation as an instrument for quality enhancement and patient compensation (Brennan, Sox and Burstin 1996; Studdert et al. 2000). Legal obstacles to quality enhancement in the tort tradition have also been identified (Liang 1999). Yet, despite concerns going back to the 1970s (particularly about malpractice insurance premiums in the United States (Sloan, 1985)), the conventional system of tort litigation remains in almost universal application.

No-fault systems of patient compensation have exerted a considerable fascination for policy makers and professional leaders (Petersen 1995; Horwitz and Brennan 1995). Thus, even while there seems little prospect of major malpractice reform in the United States in the current political climate (Kinney 1995), limited experiments with no fault have been initiated and remain in operation (Studdert, Fritz, and Brennan 2000). Nevertheless such initiatives have been few and isolated, and it still holds that few jurisdictions have embarked on a major departure from the tort tradition (Brahams 1988). One country that has, however, is New Zealand. Under a public insurance scheme that provides generic, 24-hour cover for the full range of accidental injury, "medical misadventure" in New Zealand can be compensated without the requirement to prove fault in a court of law.

The purpose of this paper, following a brief description of the New Zealand system, is to contribute further to the debate on no fault by addressing two empirical questions about the New Zealand scheme's performance. Very broadly, these questions relate to what might be called, respectively, the "epidemiology" and the "sociology" of the claims-making process. In the first place the paper reports data from a unique epidemiological study that identifies the extent of potentially compensable medical injury occurring in a regionally representative sample of hospital admissions for calendar year 1995. Secondly, the paper contributes to what one might call the sociology of the claims-making process by reporting on actual claims lodged for medical misadventure, for the same year and region, and compares these with the pattern of potentially compensable injury events detected in the hospital admissions sample. Conclusions are then drawn about the

performance of medical misadventure compensation – specifically level and selectivity of uptake - under no fault in a system of a quarter of a century's standing.

The New Zealand System

New Zealand's system of no-fault accident compensation was established in 1972 following a national inquiry into workers' compensation carried out by a judge of the Supreme Court, Sir Owen Woodhouse. The Accident Compensation Act abolished tort liability for "personal injury by accident" and provided instead for a system of compensation based on assessed need, to be funded out of taxes and a compulsory payroll levy (Campbell 1996).²

The issue of medical injury had not been a matter of concern prior to the Act – historically few malpractice suits had been lodged against physicians (Studdert et al., 1997) - and therefore little thought had been given to the implications of such sweeping legislation specifically for medical "accidents".³ In due course, clarification was required in order to specify the circumstances of compensation for medical injury, with the most recent set of definitions established in the major revisions to the Act of 1992.⁴ Two categories of medical misadventure were identified – "error" and "mishap". Error is defined either as a lack of a standard of care and skill reasonably to be expected, or a negligent failure to diagnose, or a negligent failure to obtain informed consent. Mishap is a rare and severe adverse outcome to treatment properly given, with rarity defined as an outcome expected in less than one per cent of cases, and severity as either death, at least

14 days in hospital, or a significant disability lasting longer than 28 days. Compensation covers all treatment and rehabilitation costs, together with disability support where relevant. Lump-sum compensation may also be payable under recent legislative provisions.

In Table 1 information about the New Zealand scheme is presented for the years 1994/6. These years have been selected because they span the period for which data was collected in the study reported in this paper. These years are also strategic because they permit an analysis of the scheme in a period of relative stability following change to its governing legislation in 1992.⁵ It can be seen that fewer than 1,000 claims were accepted in either year, a pattern that is - within an order of magnitude - typical of the New Zealand scheme.⁶ Given that about half all claims lodged with the corporation are declined, this means that in a population of 3.8 million approximately 2,000 claims for compensation are made, a rate of claiming to the public insurer of about 50 per 100,000 population per year. The great majority of new claims accepted by the insurer are in the category of "mishap", as reflected also in the sums of money set aside for compensation.⁷ Surgical specialties predominate for both error and mishap.

TABLE 1 ABOUT HERE

Methods

The detailed empirical investigation reported here rests on the separate analysis and comparison of two, parallel sources of data for the Auckland region in 1995 – that is, a representative sample of hospital admissions, and a complete set of claims lodged for compensation under medical misadventure with the Accident Compensation Corporation.

The hospital admissions sample was drawn from the three major non-specialist public hospitals in the Auckland region, with the survey population defined as all patient admissions for calendar year 1995 (excluding day and psychiatric cases). The sampling frame for each hospital was the list of all eligible admissions in that hospital. The New Zealand Health Information Service selected a systematic list sample of 525 admissions from each of these hospitals for the year 1995, with cases ordered by admission date from January 1 to December 31. The selected time of admission for sampled cases signalled an index admission. The medical record associated with each index admission was analysed for the occurrence of an adverse event. These events were taken as the study measure of iatrogenic injury incurred by hospital patients (and thus potentially subject to a claim for compensation).

An adverse event was operationally defined as an unintended injury or complication resulting in temporary or permanent disability - including increased length of stay and/or financial loss to the patient - caused by health care management (rather than the underlying disease process). Preventability of an event was defined as an error in management due to failure to follow accepted practice at an individual or system level.

The core data collection procedure of the study was a two-stage retrospective review of medical records using a screening protocol (Review Form 1) and a schedule for adverse event determination (Review Form 2), both closely modelled on the comparable instruments in the American and Australian studies (Brennan et al. 1991; Wilson et al. 1995). The first stage of the review was undertaken by registered nurses using Review Form 1. The purpose of this stage was to ascertain if the hospitalisation in question - the index admission - met any of 18 screening criteria selected as potentially indicative of an adverse event. The second stage was undertaken by senior physicians with a career of service in the New Zealand hospital system. They used Review Form 2, an instrument relying on structured implicit review (that is, the guided exercise of professional judgement). The objective of this exercise was to determine whether the index admission was associated with an adverse event and, if so, to characterise it according to key clinical criteria. Reviewers were guided by a series of evaluative questions designed to assist them identify instances of patient injury caused by health care management (Davis et al., 2001a).

The claims sample consisted of all claims for medical misadventure in calendar year 1995 made by residents of the Auckland region. These claims were lodged with the Accident Compensation Corporation, New Zealand's monopoly state insurer for injury by personal accident (hereafter termed "the Corporation"). Field work was carried out in 1998 in four regional offices of the Corporation. Data made available to the study investigators consisted of the full review file compiled by Corporation staff, together with a copy of the claimant's medical record.⁸ Only the second stage of the analysis

outlined in the previous paragraph was carried out - namely administration of Review Form 2. Physicians trained and experienced with the analysis of the sample of hospital admissions used the same protocol for the claims data, albeit modified in some minor respects.

For both data sets routine checks were carried out to improve the quality of information gathered. Thus, for the sample of hospital admissions, forms were checked for completeness and adequacy at both stages. Agreement between RN and MO assessments was used as a measure of reliability. The validity of the judgements made by screeners and reviewers was assessed according to the measure of their agreement with an external criterion; in this case, Expert Reviewer (ER) screening/reviewing of a one in ten sub-sample of admissions in two of the three hospitals, carried out "blind". The ER ratings were treated as the criterion against which the RN screeners and MO reviewers were judged. In the case of the claims sample only the validation against the ER was carried out.

Results

Hospital Admissions Sample

The data drawn from the hospital admissions study are reported in full elsewhere (Davis et al. 2001a; 2001b). Of the original 1,575 medical records sampled from three hospitals, 142 were identified as being associated with an adverse event (as defined according to

study protocols). These events were assessed for their compensability, and the results of this analysis are presented in Table 2 according to a range of criteria. About a fifth of adverse events in the hospital admissions sample - 27 in all - were judged to be compensable.

TABLE 2 ABOUT HERE

While compensable events differed little from the non-compensable ones in patient mix – age and gender – and preventability, they showed a much higher level of impact – permanent disability or death - and a slightly lower level of certainty about the role of healthcare management (i.e. treatment). These events were also less likely to have occurred in a public hospital (the source of the sample) and to be surgical incidents, but much more likely to be judged as requiring remedial action through education.

Compensation Claims Sample

In total, 269 claims were lodged by residents of the Auckland region for incidents occurring in calendar year 1995 (see Figure 1).⁹ Of these, 43 could not be located and 4 had insufficient documentation for the administration of the study protocol. Of the remaining 222 files, eight were found to be claims lodged in 1995 for incidents occurring in a different year and were excluded. A further 38 cases were judged by reviewers not to meet study definitions of an AE, leaving 176 claims for complete analysis.

FIGURE 1 ABOUT HERE

As previously described, there are two grounds for compensation under Corporation regulations for medical misadventure - mishap and error. In the claims sample adverse events were assessed by study reviewers as to their likelihood of compensation for medical misadventure under these definitions. Of the 176 adverse events, approximately a quarter - 41 - were judged not to qualify for compensation on any grounds. Of the remainder, 38 were classified as error and 96 as mishap. A third category of eligibility for compensation - personal injury by accident - was also identified by reviewers.

The judgements of the 176 events by study reviewers were made in full knowledge of the Corporation's decision and, perhaps predictably, showed a high degree of agreement with the formal assessments arrived at by Corporation personnel (Table 3). Nevertheless, there were two areas of difference. In 16 cases study reviewers and Corporation personnel disagreed on whether or not a claim justified compensation, with the insurer adopting a more inclusive interpretation. Furthermore, in the distribution of justified claims between mishap and error, Corporation personnel were more conservative in attributing error, accepting 21 fewer cases in this category than study reviewers.¹⁰

TABLE 3 ABOUT HERE

The key distinguishing characteristics of compensable claims are outlined in Table 4, with a comparison of the profiles of medical error – sub-standard care – and medical mishap. Thus, as expected given Corporation definitions and decisions, error claims were

much more likely to be judged by study reviewers - using study protocols - as highly preventable and requiring remedial action of an educational nature, and as being less likely to be associated with severe patient impact (permanent disability or death). These claims were also more likely to be for an incident other than a surgical event, and to have taken place outside a public hospital. The level of certainty about healthcare management causation was also much higher for this group.

TABLE 4 ABOUT HERE

Comparison of Compensable Cases in Admissions and Claims Samples

Once the assessment of compensability had been made by study reviewers it was possible to compare characteristics of hospital patients judged to have suffered a compensable injury with those in the claims sample. In order to increase the comparability of the two samples all successful claims without an episode of hospital treatment were excluded. The resultant samples are compared in Table 5. Successful claimants were younger and more likely to be female, they were less likely to be seriously disabled or to be claiming for medical error. Over two-thirds involved a surgical incident.

TABLE 5 ABOUT HERE

Discussion

There is widespread international interest in the performance of no-fault systems of compensation for iatrogenic injury. A particular focus has been on the likely cost of moving to no-fault compensation (Studdert et al. 1997). Yet the outcome of such costing exercises turns crucially on a range of assumptions about the likely pattern of claims. Despite the existence of a number of well-established and comprehensive systems of no-fault compensation - in New Zealand and the Scandinavian countries - little research has been conducted on the epidemiology (Kravitz, Rolph, and McGuigan 1991) and sociology (Vincent, Young, and Philips 1994) of "claims-making and -processing" in such systems.

Epidemiology - eligibility for compensation

While a number of studies have identified the potential pool of claims in tort systems, to date no research has been published on the pattern of compensability in a "no fault" jurisdiction. In the case of the United States, for example, it has been estimated that just less than one percent of hospital admissions are likely to be associated with a negligent adverse event (Brennan et al. 1991; Thomas et al. 2000). In the current study just over two per cent of the hospital admissions sample were associated with a compensable adverse event, half of which were deemed medical "error" (the closest equivalent to negligence). On the face of it, therefore, the potential pool of claims for sub-standard care - error or negligence - seems to be similar across these two medico-legal jurisdictions.

Sociology - pattern of claims-making and -processing

One striking characteristic of the claims-making process for malpractice or negligence under tort is that many claims - if not the majority - appear to be made for incidents that are not negligent and, indeed, may not even qualify as adverse events (Studdert et al. 2000). Furthermore, few claims are actually lodged – under two per cent of negligent events (Localio et al. 1991) - and a very small proportion are eventually successful (probably fewer than half of claims laid (Brennan, Sox and Burstin 1996)).

The present study suggests that claims lodged under no fault in New Zealand - or at least those claims that are formally assessed - are well targeted. Not only were the great majority of claims clearly adverse events, but they were also mostly assessed to be compensable (about 60 per cent of eligible claims were deemed compensable by study reviewers).

On the assumption that two per cent of hospital admissions are associated with a compensable adverse event, approximately 3,000 such incidents would have been expected in the Auckland region for 1995. However, only 150 such claims were laid, reflecting a ratio of about 1:20 (or an ostensible rate of about 5 per cent). Two-thirds of these were judged compensable.

A further aspect of the issue of uptake is the socially and clinically selective nature of the claiming and litigation process. In the United States the poor, the uninsured and the elderly are less likely to claim for malpractice given medical injury (Studdert et al. 2000; Burstin et al. 1993; Sager et al. 1990). There is also an indication that more serious cases

are the subject of claims (Studdert et al. 2000), and that surgical incidents are well represented (Kravitz, Rolph, and McGuigan 1991; Brahams 1988).

Data in Table 5 show that those judged by the Corporation to have claims eligible for compensation in the current study were younger than the matching sample drawn from hospital admissions, were more likely to be claiming for surgery, were less likely to have incidents judged to be medical error, and included a higher than expected proportion of female patients. Other features of difference were the higher level of certainty about management causation in the successful claims sample, and the lower proportions of preventability and severe patient impact (permanent disability or death).

Some of these points of difference are plausible. Thus, if a successful claim is likely to be around a clearly-defined adverse event, then surgical mishaps are likely to fit the bill (as confirmed in New Zealand-wide data for the compensation scheme, Table 1). This may also help account for the high proportion of certainty about management causation in successful claims. Furthermore, if, as the data in Table 1 also suggest, a high proportion of such claims are likely to be in obstetrics and gynaecology, then this may in part also account for the predominance of successful female claimants. The low proportion of error claims is, again, consistent with the data in Table 1, and this in turn accounts for the low level of preventability among successful claims. Harder to explain is the low level of patient impact (permanent disability or death). This may be accounted for by the fact that the New Zealand scheme has not provided for lump-sum compensation, and that significant on-going earnings-related compensation is only available for this in the

workforce. These two features could discourage older patients from claiming, the very group that is more vulnerable to more severe events (Davis et al., 200c).

In summary, it can be said that, despite the lack of legal, financial and bureaucratic barriers, the rate of claiming in New Zealand's no-fault system is not markedly higher than that recorded under tort. Furthermore, there is a powerful selective process in operation, both socially and in clinical terms. The typical successful claimant was younger and female, and had experienced a surgical event that was unexpected but not attributable to sub-standard professional care, that was clearly defined and strongly related to the treatment rather than the underlying disease process, and that resulted in a temporary disability.¹¹

Methodological issues

Although the study is unique in being the first to establish a link between claims to a public insurer for medical misadventure and the population of adverse events generating those claims, there are a number of apparent methodological weaknesses. Firstly, the study did not secure exact event-to-claim matching as achieved in some earlier investigations (Localio et al. 1991; Studdert et al. 2000). Instead, the study provides a comparison of two sets of profiles, one - the hospital admissions data set - representing a

sample from a wider population from which the other - the complete record of claims - is drawn.

Secondly, the hospital admissions sample cannot be taken as being fully representative of the potential range of sites and severity of adverse events that might generate claims. In particular, adverse events occurring in a health setting outside a public hospital are excluded, unless they happen to result in a hospital admission. Thus, adverse events in private hospitals and in non-hospital settings may be under-represented. Excluding these cases from the claims sample made no difference to the pattern of comparison, and this exclusion criterion was maintained in the subsequent analysis in order to achieve a more standardised basis for comparison (see Table 5).

Thirdly, a number of studies have suggested that incidents identified from medical records may not account for the majority of events identified from a range of sources, including observation (Andrews et al. 1997) and voluntary reporting (O'Neil et al. 1993). However, while the process of lodging a claim depended on individual and voluntary reports by patients, in each case the medical record provided a source of information that was crucial to the arbitration of the outcome for compensation. Therefore, despite the reliance on individual patient initiatives in laying claims, the key data source in establishing iatrogenic injury and assessing compensability in both samples was the medical record.

Fourthly, both samples are drawn from Auckland, New Zealand's largest and most culturally diverse city. To this extent the study may not be taken as representative of the wider New Zealand system. However, over a third of the population lives in the region and about a third of all public hospital discharges are also recorded in the city. The results of this study, therefore, can be taken as strongly indicative of the New Zealand pattern. Furthermore, it should be noted that the three hospital sites, while representing the notional base hospitals in the three health authorities of the Auckland region, excluded significant specialist centres in cardiac surgery, and children's and women's health. Furthermore, none of the three selected hospitals were in the private sector, even while incidents occurring in private hospitals accounted for a significant proportion of both claims and admissions. Excluding the private hospital cases from both admissions and claims samples made no significant difference to the pattern of comparison.

Finally, the assessment of compensable events was being made by study reviewers across two data sets and without calibration to Corporation definitions of compensability. However, there was face validity in reviewer judgements. For example, in Table 4 it can be seen, as expected from Corporation definitions, that nearly all medical error claims had high preventability, and high patient impact was greater for medical mishap determinations.

Conclusion

On the evidence of the results of this study the New Zealand system of no-fault compensation for medical misadventure, while it does not generate a strikingly higher level of uptake than tort jurisdictions, nevertheless attracts claims that are well-targeted in important respects. Overwhelmingly these claims are AEs, and the majority - 60 per cent - were judged to qualify as claims. Typically, however, these claims - both successful and unsuccessful - were less likely to be major, and were associated with routine, uncomplicated and non-urgent treatment, events that would be unlikely to receive consideration under a tort system. By the same token, events with a more serious impact on patients and those with a high level of preventability - including those attributable to practitioner error - were underrepresented. Furthermore, among claimants, males and the elderly were less frequently represented than might have been expected from epidemiological data.

Therefore, despite the apparent absence of procedural and financial barriers to making a claim for medical injury, the results of this study suggest that important processes of clinical and social selection are operating in the New Zealand system of no-fault compensation. In essence, relatively minor and routine events - incidents that would be unlikely to receive consideration under a tort system - were reported more frequently by claimants (successful and unsuccessful) than might be predicted from the epidemiological evidence on medical injury. By the same token, severe events, and those involving practitioner error, were less frequently the subject of claim than might have been expected. This suggests that, without other procedural changes (such as patient advocacy

and a more straightforward claiming process), a no-fault system cannot on its own necessarily address the major deficiencies of tort.

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Footnotes

1 For information on one particular incident, see <http://www.bristol-inquiry.org.uk/brisphase2.htm>

² It is something of a curiosity to observers that the New Zealand system of no fault accident compensation was introduced in an orthodox tort jurisdiction, with little apparent controversy. This may be testament to the highly regulated nature of industrial relations, at the time established for nearly a century within a tripartite strongly corporatist framework. See Palmer (1979) for a comprehensive review of the progress of this initiative from Royal Commission to statute.

3 Indeed, medical misadventure was not defined in the 1972 legislation (Campbell 1996:111).

4 Subsequently amended in the following year (Campbell 1996:113).

5 It should also be noted that separate statistics for medical misadventure were not kept until 1992.

⁶ In the nine years 1992-2000 5,750 claims for medical misadventure were accepted (an average of 639 a year, representing an acceptance rate of 43%) (Rankin, 2001).

⁷ The reasons why there should be many more mishap than error claims lodged with the Corporation are complex, varied and, to an extent, speculative. Firstly, since filing a claim with the Corporation requires cooperation from the affected health practitioner, such assistance is more likely to be forthcoming in a case of mishap rather than error (which would reflect adversely on the standard of care received). Secondly, the Corporation appears to follow a relatively conservative approach in assigning an error verdict for a claim – see Table 3 – possibly for the same reason (wishing to avoid a contested claim with the affected practitioner). Thirdly, to the extent that severity of impact on the patient is related to the likelihood of lodging a claim, so this will bring forth mishaps rather than error claims (which do not have a severity test).

⁸ In each case the file contained the Corporation's decision on the claim. In other words, the information that study reviewers had available to them was strongly shaped by internal Corporation procedures, including the final claim adjudication and decision. It should be noted, however, that this information bias did not necessarily affect the key study hypothesis. The objective of the study was to determine the extent of uptake and selectivity in claims making. The means for achieving this was the application of a common and standardised research procedure in order to achieve a high degree of comparability in matching data across two, independent sources, both created by internal, organisational hospitals likely to lead to certain biases in the information available. It is not obvious that this weakens the study methodology in any substantive respect.

⁹ Because of its dominance in the health care system, residents from other parts of New Zealand may be referred to Auckland for specialist treatment. But the reverse is unlikely to happen. Since the study sites did not include such national centres of referral, it is likely that few patients from out of the region were in the hospital sample. Conversely, the claims sample was unlikely to include many who had received care outside the region, unless they had subsequently moved to Auckland.

¹⁰ One interpretation of this result is that the Corporation feels it has to be more careful in attributing an error finding against health care professionals, particularly physicians. A mishap finding, by contrast, is less likely to be contested by the health practitioner in question.

11 An analysis of the unsuccessful claims sub-sample demonstrated that the selectivity described here characterised the process of claiming, not the decision-making on eligibility for compensation among claimants. Unsuccessful claimants were also younger and female and the incidents for which they were claiming exhibited similar attributes on certainty of causation, location (inside a public hospital) and clinical context (surgery).