

# Perceived practice change in Australian doctors as a result of medicolegal concerns

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Medicolegal concerns can prompt changes to the practice of medicine that can be both potentially beneficial and not beneficial to patient care.<sup>1-16</sup> There is international evidence from the United Kingdom, the United States, Japan, Canada and New Zealand of concerns about medicolegal issues leading to excessive referrals,<sup>5,8,13</sup> excessive ordering of tests<sup>5,8</sup> and use of imaging technology,<sup>7</sup> excessive prescribing of medication,<sup>5,8</sup> and avoidance of certain patients or procedures.<sup>4,5,13</sup> Potentially beneficial changes include that medicolegal concerns can lead to more information being given to patients<sup>4,5</sup> and to more reflective practice, greater sensitivity to societal and professional expectations, and willingness to make system improvements,<sup>15</sup> such as developing audit procedures and better record keeping.<sup>5</sup>

What is the Australian situation regarding beliefs and perceived changes in practice due to medicolegal concerns? In an earlier Australian general practitioner study, we also found evidence of practice change.<sup>16</sup>

In this article, we report new Australian evidence from a large, broad sample of Australian doctors comprising specialists, GPs and trainees. We also examine whether perceived behaviour and beliefs differ between doctors who have experienced a medicolegal matter and those who have not.

## METHODS

In September 2007, a questionnaire was mailed to all specialists (obstetricians, gynaecologists, physicians, surgeons, anaesthetists, psychiatrists, pathologists, radiologists, paediatricians, accident and emergency specialists), all registrars and specialists in training, and a sample of GP non-proceduralists insured with the medical insurance company UNITED (that company subsequently merged with another company). GP proceduralists were not included, as they had participated in our previous study. The random sample of 1865 non-procedural GPs was selected out of a possible 7275 non-procedural GPs who had not been invited to participate in the previous GP study. A summary of response rate per specialty has been published previously.<sup>17</sup>

## ABSTRACT

**Objectives:** To explore the perceived impact of medicolegal concerns on how Australian doctors practise medicine and to compare doctors who have experienced a medicolegal matter with those who have not.

**Design and setting:** Cross-sectional survey (posted in September 2007, with reminder 4 weeks later) of Australian doctors from all major specialty groups, trainees and a sample of general practitioners who were insured with a medical insurance company.

**Participants:** 2999 respondents of 8360 who were sent the survey.

**Main outcome measures:** Perceived practice changes due to concerns about medicolegal issues, beliefs about medicolegal issues, and the influence of medicolegal issues on both career choices and how doctors relate to their patients.

**Results:** Respondents reported changes in practice behaviour due to medicolegal concerns, with 43% of doctors stating that they referred patients more than usual, 55% stating that they ordered tests more than usual, and 11% stating that they prescribed medications more than usual. Respondents also reported improved communication of risk (66%), increased disclosure of uncertainty (44%), developed better systems for tracking results (48%) and better methods for identifying non-attenders (39%) and for auditing clinical practice (35%). Concerns about medicolegal issues led to 33% considering giving up medicine, 32% considering reducing their working hours and 40% considering retiring early. These proportions were all significantly greater for doctors who had previously experienced a medicolegal matter compared with those who had not.

**Conclusions:** This Australian study, like international studies, confirms that doctors' concerns about medicolegal issues impact on their practice in a variety of ways. There is a greater perceived impact on those doctors who have previously experienced a medicolegal matter.

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Surveys were sent out with reply-paid envelopes for their return. Four weeks after the mail-out, a reminder letter and repeat questionnaire were sent to non-respondents.

The questionnaire covered demographic and practice details, and experience of medicolegal matters. It also canvassed doctors' beliefs about medicolegal issues and their perceived changes in practice as a result of medicolegal concerns. The questionnaire was developed from key items in the literature,<sup>3-8,11-16</sup> and was first used in a small study with the New South Wales Health Care Complaints Commission,<sup>6</sup> and further developed for a GP study.<sup>16</sup>

The items about perceived changes in practice behaviour due to medicolegal concerns are listed in Box 1. There were four response categories: less than usual, no change from usual, more than usual, and not applicable. A series of statements about beliefs and understanding of the law as it

relates to medicolegal issues are listed in Box 2. Response categories for these items were: "strongly disagree", "disagree", "agree" and "strongly agree". Items on the perceived influence of medicolegal issues on career choice and on how doctors relate to patients are shown in Box 3 and Box 4, respectively. Response categories for these items were "yes" or "no".

The questionnaire asked if doctors had ever been the subject of one of the following medicolegal matters: a claim for compensation for damages; a complaint to a health care complaints body; a medical registration board inquiry; a disciplinary hearing; a Medicare Australia/Health Insurance Commission (HIC) inquiry; a hospital dispute; a hospital investigation; a pharmaceutical services inquiry; a complaint before an anti-discrimination board; a coronial inquiry; a criminal charge; and a patient complaint direct to the doctor. Self-report data were

## 1 Perceived change in practice behaviour due to concerns about medicolegal negligence claims and complaints\*

Item	All respondents			Respondents who had experienced MLM		Respondents who had not experienced MLM		Difference <sup>§</sup> (95% CI)	P
	Not applicable	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>		
Provide communication of risk to patients	70	2844	1874 (66%)	1859	1278 (69%)	985	596 (61%)	8 (5 to 12)	< 0.001
Order tests	116	2810	1546 (55%)	1844	1047 (57%)	966	499 (52%)	5 (1 to 9)	0.01
Put systems in place to track test results	340	2564	1226 (48%)	1690	835 (49%)	874	391 (45%)	5 (1 to 9)	0.03
Disclose uncertainty	65	2859	1262 (44%)	1868	884 (47%)	991	378 (38%)	9 (5 to 13)	< 0.001
Refer patients to specialists	368	2548	1096 (43%)	1647	712 (43%)	901	384 (43%)	-1 (-5 to 3)	0.8
Avoid a particular type of invasive procedure	598	2334	931 (40%)	1575	660 (42%)	759	271 (36%)	6 (2 to 10)	0.01
Put systems in place to identify non-attenders	580	2333	909 (39%)	1557	645 (41%)	776	264 (34%)	7 (3 to 12)	0.001
Consider every patient a potential litigant	79	2843	1039 (37%)	1860	771 (41%)	983	268 (27%)	14 (11 to 18)	< 0.001
Put systems in place to audit practice	320	2596	906 (35%)	1722	618 (36%)	874	288 (33%)	3 (-1 to 7)	0.15
Avoid particular obstetric procedure	2109	813	277 (34%)	537	207 (39%)	276	70 (25%)	13 (6 to 20)	< 0.001
Relate empathically to patients	77	2841	730 (26%)	1861	523 (28%)	980	207 (21%)	7 (4 to 10)	< 0.001
Prescribe medication	277	2649	285 (11%)	1738	194 (11%)	911	91 (10%)	1 (-1 to 4)	0.39
Advise patients of complaints policy	294	2626	255 (10%)	1725	171 (10%)	901	84 (9%)	1 (-2 to 3)	0.68

MLM = medicolegal matter.

\* Results relate to participants who agreed that they performed the behaviour listed in the item column more than usual when asked: "Do concerns about medical negligence/complaint cause you to [item] less than usual, no change from usual, more than usual or not applicable?". † The number who responded to the item (excluding "not applicable" responses). ‡ The number (%) who agreed that they had changed their practice behaviour in accordance with the statement. § Percentage of respondents with experience of MLM who changed their behaviour more than usual minus the percentage of respondents with no experience of MLM who changed their behaviour more than usual.

thought to be more inclusive, as some doctors may have changed insurers, not had an insurer previously, or chosen not to discuss matters with their insurer. The proportion of doctors who self-reported ever being involved in a medicolegal matter by medical specialty and type of matter was reported in the Journal in 2009.<sup>17</sup>

### Statistical analysis

Response categories were dichotomised according to whether or not doctors had experienced medicolegal matters, and differences between respondents who had and had not experienced medicolegal matters were assessed using Pearson's  $\chi^2$  tests. Given the large size of our sample, very small differences between those who had and had not experienced medicolegal matters could be detected, and consequently, differences were considered statistically significant at  $P \leq 0.01$ . The estimated differences between proportions and corre-

sponding 95% confidence intervals are also presented.

Statistical analysis was undertaken using SPSS, version 15 (SPSS Inc, Chicago, Ill, USA).

### Ethics approval

Approval for the study was granted through ethics committees of the Northern Sydney Central Coast Area Health Service and the University of Sydney, and the Board of UNITED (now Avant). Anonymity and confidentiality of survey responses and Avant membership and data were protected at all times.

## RESULTS

Eight thousand five hundred doctors were invited to participate in the study. One hundred and forty declined, leaving 8360 who received the survey. Two thousand nine hundred and ninety-nine responded, repre-

senting a 36% response rate (2999/8360). Experience of medicolegal matters was self-reported by 1902 of 2942 respondents (65%), with 426 (14%) having a current matter. The two most common medicolegal matters were claims for compensation (31%) and complaints to a health care complaints body (30%), and the least common were criminal charges (< 1%), pharmaceutical services inquiries (1%), antidiscrimination board complaints (1%) and disciplinary hearings (2%).

A comparison of respondents with non-respondents according to age, sex, specialty and history of medicolegal matters derived from Avant data found minor differences only. Respondents were slightly older (mean age, 51.7 years v 50.3 years), proportionally fewer men responded (71% v 74%), and respondents were slightly more likely than non-respondents to have been involved in claims for compensation (28.0% v 23.0%), complaints to a health care complaints body

## 2 Beliefs about medicolegal issues\*

Item	All respondents		Respondents who had experienced MLM		Respondents who had not experienced MLM		Difference <sup>§</sup> (95% CI)	P
	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>		
All doctors make mistakes	2933	2865 (98%)	1896	1855 (98%)	1037	1010 (97%)	1 (-1 to 2)	0.53
Inadequate communication is a factor in most mistakes	2929	2739 (94%)	1892	1744 (92%)	1037	995 (96%)	-4 (-6 to -2)	<0.001
My awareness of risks of medical negligence has increased in recent years	2928	2678 (91%)	1895	1741 (92%)	1033	937 (91%)	1 (-1 to 3)	0.31
I feel comfortable discussing my mistakes with my colleagues	2930	2319 (79%)	1894	1494 (79%)	1036	825 (80%)	-1 (-4 to 2)	0.67
Doctors are encouraged to report their medical errors	2924	1775 (61%)	1892	1138 (60%)	1032	637 (62%)	-2 (-5 to 2)	0.43
Professional standards should be set solely by the medical profession	2919	1694 (58%)	1889	1114 (59%)	1030	580 (56%)	3 (-6 to 11)	0.18
The law requires me to make perfect decisions	2922	1577 (54%)	1889	1062 (56%)	1033	515 (50%)	6 (3 to 10)	<0.001
Medical mistakes are rare	2931	549 (19%)	1894	372 (20%)	1037	177 (17%)	3 (0 to 5)	0.01
An apology to a patient implies an admission of liability	2920	460 (16%)	1886	319 (17%)	1034	141 (14%)	3 (1 to 6)	0.02
Patients are likely to sue a doctor who tells them about a mistake	2920	341 (12%)	1887	250 (13%)	1033	91 (9%)	4 (2 to 7)	<0.001
Only unprofessional or incompetent doctors get sued	2929	78 (3%)	1896	47 (2%)	1033	31 (3%)	-1 (-2 to 1)	0.47

MLM = medicolegal matter.

\* Perceptions of mistakes, complaints and legal risk were assessed by asking respondents whether they strongly disagreed, disagreed, agreed or strongly agreed with the statements in the item column. † The number who responded to the item. ‡ The number (%) who agreed or strongly agreed with the statement. § Percentage of respondents with experience of MLM who agreed or strongly agreed with the statement minus the percentage of respondents with no experience of MLM who agreed or strongly agreed with the statement. ◆

(20.6% v 17.1%), and coronial inquiries (4.7% v 3.3%). The differences for all three comparisons of medicolegal matters were significant at  $P < 0.01$ . There was no difference between respondents and non-respondents with respect to the other nine categories of medicolegal matter. Further discussion about the comparison of respondents with non-respondents, and a comparison of our sample with the Australian medical workforce in general was previously reported in 2009.<sup>17</sup>

### Perceived change in practice behaviour due to concerns about medical negligence claims and complaints

The proportion of doctors who reported altering their practice behaviour relating to a particular item "more than usual" due to concerns about medical negligence and complaints is reported in Box 1. A varying number of respondents reported that items were not applicable, as shown. The table in

Box 1 lists the items in descending order of the frequency with which they were reported to influence practice by all respondents, and compares doctors who had and had not experienced a medicolegal matter.

For 8 of the 13 items, participants who had experienced a medicolegal matter were significantly more likely than those who had not to perceive that they had changed practice in response to medicolegal concerns.

### Beliefs about medicolegal issues

Box 2 shows agreement among respondents with statements about medicolegal issues. The proportion agreeing includes those who strongly agreed and agreed. Respondents who had experienced a medicolegal matter were more likely to agree that "the law requires me to make perfect decisions" and "patients are likely to sue a doctor who tells them about a mistake", but less likely to agree that "inadequate communication is a factor in most mistakes".

### Perceived influence of medicolegal issues on career choices

Respondents who had experienced a medicolegal matter were more likely to agree with all four statements on career choices listed in Box 3, compared with those with no experience of a medicolegal matter ( $P < 0.001$ ).

### Perceived influence of medicolegal issues on how doctors relate to patients

Respondents with experience of a medicolegal matter were more likely to agree with all four statements listed in Box 4 about relating to patients, compared with those with no experience of a medicolegal matter ( $P < 0.001$ ).

## DISCUSSION

We found that Australian doctors report that concerns about medicolegal action changes the way they would normally practise medi-

### 3 Perceived influence of medicolegal issues on career choices\*

Item	All respondents		Respondents who had experienced MLM		Respondents who had not experienced MLM		Difference <sup>§</sup> (95% CI)	P
	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>		
Retiring early?	2919	1169 (40%)	1895	877 (46%)	1024	292 (29%)	18 (14-21)	<0.001
Giving up medicine?	2909	957 (33%)	1886	728 (39%)	1023	229 (22%)	16 (13-20)	<0.001
Reducing your hours of work?	2903	929 (32%)	1885	720 (38%)	1018	209 (21%)	18 (14-21)	<0.001
Changing your speciality?	2882	320 (11%)	1867	238 (13%)	1015	82 (8%)	5 (2-7)	<0.001

MLM = medicolegal matter.

\* Participants were asked to respond "yes" or "no" to the question: "Have concerns about medicolegal issues caused you to consider" the option in the item column.

† The number who responded to the item. ‡ The number (%) who agreed with the statement. § Percentage of respondents with experience of MLM who answered "yes" to the item minus the percentage of respondents with no experience of MLM who answered "yes" to the item. ◆

cine. Our findings concur with most of those in international studies, and provide new information by also comparing doctors who have experienced a medicolegal matter with those who have not.

The increase in referral rates reported by 43% of our respondents is lower than the rate in the US Common Good study (74%)<sup>8</sup> and the UK GP study (64%),<sup>5</sup> although this reflects the difference between the samples — the UK study included only GPs while ours included mainly specialists. The costly increase in test ordering reported by 55% of our sample was similar to the rate in the UK study (60%),<sup>5</sup> but lower than that in the US Common Good study (79%).<sup>8</sup> Unnecessary prescribing is both expensive and potentially dangerous. However, only 11% of our sample reported this practice. This compares favourably with the UK GP study, in which 29% perceived that they prescribed unnecessary drugs, and the US Common Good study, in which 41% believed they prescribed more medication for fear of litigation.<sup>8</sup> It is possible that the campaigns for safe prescribing over the past decade in

Australia may have had a positive effect on prescribing practices.<sup>18</sup>

A significant number of doctors with experience of a medicolegal matter had more negative attitudes towards their work and in their relationships with their patients. Concerns about medicolegal issues caused 33% of the total cohort to consider giving up medicine, 32% to consider reducing hours of work, 40% to consider retiring early, and 18% to feel more emotionally distant from patients. All these were significantly more common in doctors with experience of a medicolegal matter compared with those with no such experience. Similarly, changes in relating to patients were reported in a study of New Zealand doctors who had experienced complaints, with a reduction in both trust of patients (38% in the short term and 32% in the long term) and sense of goodwill towards patients (29% in the short term and 18% in the long term).<sup>14</sup> The US Common Good study reported that 38% of respondents thought the fear of malpractice made their relationship with patients less personal.<sup>8</sup>

Doctors reported some improvements of care due to medicolegal concerns, such as improved communication of risk to patients, which was reported by 66%. The need to disclose uncertainty surrounding diagnosis or treatment was increased in 44% of respondents, with a 9% greater difference in those who had experienced a medicolegal matter compared with those who had not. There were perceived improvements to quality and safety measures due to medicolegal concerns, with better systems for tracking test results reported by 48%, better methods to identify non-attenders reported by 39% and routine auditing of clinical practice reported by 35%.

There was near universal agreement (98%) that doctors make mistakes, yet 54% believed that the law required them to make perfect decisions. This proportion was significantly higher among doctors with, than among those without experience of a medicolegal matter. Yet the law does not require perfection. The majority decision of the High Court of Australia in *Rogers v Whitaker* established that "The law imposes

### 4 Perceived influence of medicolegal issues on how doctors relate to patients\*

Item	All respondents		Respondents who had experienced MLM		Respondents who had not experienced MLM		Difference <sup>§</sup> (95% CI)	P
	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>	N <sup>†</sup>	Agree <sup>‡</sup>		
Provide more information to patients?	2918	2373 (81%)	1894	1578 (83%)	1024	795 (78%)	6 (3-9)	<0.001
Are more attentive with patients?	2908	1594 (55%)	1887	1091 (58%)	1021	503 (49%)	9 (5-12)	<0.001
Are more selective regarding patients seen?	2913	795 (27%)	1891	623 (33%)	1022	172 (17%)	16 (13-19)	<0.001
Are more distant from patients emotionally?	2907	516 (18%)	1886	393 (21%)	1021	123 (12%)	9 (6-12)	<0.001

MLM = medicolegal matter.

\* Participants were asked to respond "yes" or "no" to the question: "Do concerns about medicolegal issues affect how you relate to patients in that you:" (statement in the item column). † The number who responded to the item. ‡ The number (%) who agreed with the statement. § Percentage of respondents with experience of MLM who answered "yes" to the item minus the percentage of respondents with no experience of MLM who answered "yes" to the item. ◆

on a medical practitioner a duty to exercise reasonable care and skill in the provision of professional advice and treatment."<sup>19</sup>

Nineteen per cent of respondents believed that medical mistakes are rare. This is at odds with the patient safety literature which highlights the extent of adverse events and negligence in many developed countries.<sup>20-23</sup>

Our study has some limitations. The response rate of 36% was relatively low, but this rate is in keeping with some other studies of medical practitioners.<sup>24</sup> This study is the largest of its kind in Australia, and one of the largest in the world. The respondent sample represents 5% of the Australian medical labour workforce, 3% of all GPs and about 10% of each specialty group (ranging from 9% for physicians to 14% for obstetricians/gynaecologists).<sup>25</sup> A weighted analysis was conducted to adjust the estimated percentages, according to the proportions of GPs and specialty respondents based on Australian workforce data.<sup>25</sup> Almost all weighted percentages were very similar to the unweighted percentages — they differed by less than 3%. There were three exceptions, all with respect to the perceived change in behaviour due to concerns about medical negligence and complaints (Box 1). Ordering tests was estimated to be 60% (compared with 55%); tracking test results was estimated to be 53% (compared with 48%); and referring patients to specialists was estimated to be 51% (compared with 43%). These changes mainly reflect the higher weighting that was given to GP responses.

This Australian study, similar to studies in the US, Canada, UK, Japan and New Zealand, indicates that doctors perceive that their concerns about medicolegal issues impact on their practice of medicine. Also similar to international studies, many Australian doctors perceive they make increased referrals and order tests due to concerns about medical negligence and complaints. However, there is considerably less impact on the prescribing of medications in Australia.

Doctors' experience of a medicolegal matter may lead them to consider reducing their hours of work and the years they intend to practise. For some doctors, there is a greater reserve in dealing with patients.

A significantly higher number of doctors with experience of a medicolegal matter state their intention to give up medicine, reduce their working hours or retire early. Whether they actually do was not investigated by this study.

Appropriate education for doctors would include knowledge of the medicolegal envi-

ronment and an understanding of how medicolegal concerns may weaken sound clinical judgement, cause unnecessary costs, burden health care resources, and constrain improvements in health care delivery.<sup>15</sup> Targeted training in patient safety and medicolegal aspects of medical practice will help doctors to be better informed and to better understand how such issues influence their judgement and decisionmaking.

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## COMPETING INTERESTS

None identified.

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