An exploratory study of the impact of the medico-legal environment on surgical practice in Ireland

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Abstract

Defensive medicine describes behaviours engaged in by physicians, for the purposes of averting the threat of medical negligence litigation and/or complaints.[1] Defensive practice typically encompasses 'assurance' or 'avoidance' behaviours, or 'positive' or 'negative' defensive medicine.[2] Assurance behaviours include, for example, meticulous notetaking and ordering further clinically unnecessary tests, whereas avoidance behaviours encompass actions such as refusing to engage with a patient perceived to be high-risk. Whilst such practices may be understandable, defensive medicine is problematic for a number of reasons: it may result in a lower standard of patient care, where for example, a patient is exposed to unnecessary risk(s); and it can increase healthcare costs, which in turn limits resources.[3] Drawing on the findings of a survey of surgeons in Ireland, this study investigates the existence of defensive practices, and explores the impact of the civil and regulatory responses to patient safety incidents on surgical practice. Given the increasing emphasis on patient safety and cultivating a "no-blame" culture both nationally and internationally, the findings of this research illustrate the tension between the current medico-legal and regulatory environment and medical practice, with implications for quality and safety.

Keywords: Defensive medicine; liability; litigation; patient safety.

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[1] M. Sethi, W. Obremskey, H. Natividad, et al., 'Incidence and costs of defensive medicine among orthopedic surgeons in the United States: a national survey study', *American Journal of Orthopaedics* 41 (2012) 69.
[2] D. Studdert, M. Mello, W. Sage, et al., 'Defensive medicine among high-risk specialist physicians in a volatile malpractice environment', *JAMA* 293(21) (2005) 2609.
[3] M.B. Rothberg, J. Class, T.F. Bishop, et al., 'The cost of defensive medicine on 3 hospital medicine services', *JAMA Intern Med.* 174(11) (2014) 1867-1868; O. Ortashi, J. Virdee, R. Hassan, et al., 'The practice of defensive medicine among hospital doctors in the United Kingdom', *BMC Med Ethics* 14 (2013) 42.

1 Introduction

The concept of defensive medicine was initially borne out of the growth of medical malpractice litigation in the USA,[4] where there is a vast body of literature on this topic.[5] In a European context, interest in this phenomenon has grown over the past number of decades, with studies emerging from the UK,[6] Italy,[7] the Netherlands,[8] Belgium,[9] and Denmark,[10] amongst others. Defensive medicine is reported to be increasingly practiced internationally,[11] across a number of areas of medical practice, including, surgery,[12] general practice;[13] and obstetrics.[14] However, data relating to defensive practice in an Irish context, and its causes, is non-existent.

Whilst traditionally conceived of in the context of civil litigation, research suggests that defensive practice in medicine and its causes are nuanced and complex. As Case surmises it is 'a multifactorial phenomenon',[15] and for example, can also arise as a means of mitigating against complaints and criticism.[16] In recognition of the multitude of factors which may influence or result in defensive practices, this research investigates and compares the existence of defensive practice in response to civil (medical negligence) and regulatory (Medical Council complaints) processes, amongst surgeons in Ireland. In doing so, this study contributes to the international discourse and broadens our understanding of the phenomenon of defensive practice and the impact of the current medico-legal frameworks on surgical practice, including implications for patient care.

The paper first provides context with an overview of the medico-legal environment in Ireland, and then proceeds to discuss the methodological approach of this research. The findings of the survey are then presented and analysed. Finally, the article concludes by arguing

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[4] L. Tancredi, J. Barondess, 'The problem of defensive medicine', *Science* 200(4344) (1978) 879-82.

[5] See for example, P.J. Guthorn, 'Toward a defensive stance in medical practice', *J Med Soc N J* 65 (1968) 548; M. Sethi, W. Obremskey, H. Natividad, et al., 'Incidence and costs of defensive medicine among orthopedic surgeons in the United States: a national survey study', *American Journal of Orthopaedics* 41 (2012) 69-73; B. V. Nahed, 'Malpractice liability and defensive medicine: a national survey of neurosurgeons', *PloS one* 7(6) (2012) e39237; D. Kessler and M. McClellan, 'Do doctors practice defensive medicine', *The Quarterly Journal of Economics* 111(2) (1996) 353.

[6] O. Ortashi et. al, 'The practice of defensive medicine among hospital doctors in the United Kingdon', *BMC Medical Ethics* 14(1) (2013) 1; N. Summerton, 'Positive and negative factors in defensive medicine: a questionnaire study of general practitioners', *BMJ* 310.6971 (1995) 27.

[7] See for example, M. Panella et. al, 'Prevalence and costs of defensive medicine: a national survey of Italian physicians', *Journal of Health Services Research & Policy* 22(4) (2017) 211.

[8] S.C. Yan et. al, 'Defensive medicine amongst neurosurgeons in the Netherlands: a national study', 159(12) (2017) *Acta Neurochirurgica* 2341.

[9] T. Vandersteegen et. al, 'The determinants of defensive medicine practices in Belgium', *Health Economics, Policy and Law* 12(3) (2017) 363.

[10] E. Assing Hvidt et. al, 'How is defensive medicine understood and experienced in a primary care setting? A qualitative focus group study among Danish general practitioners', *BMJ Open* 7(12) (2017) e019851.

[11] L. Nash, M. Walton, M. Daly, et al., 'GPs' concerns about medicolegal issues: How it affects their practice', *Aust Fam Phys.* 38 (2008) 66-70; T. Hiyama, M. Yoshihara, S. Tanaka, et al., 'Defensive medicine practices amongst gastroenterologists in Japan', *World J Gastroenterology* 12(47) (2006) 7671-5.

[12] Sethi M, Obremskey W, Natividad H, et al., 'Incidence and costs of defensive medicine among orthopedic surgeons in the United States: a national survey study', *American Journal of Orthopaedics* 41 (2012) 69-73.

[13] N. Summerton, 'Positive and negative factors in defensive medicine: a questionnaire study of general practitioners', *BMJ* 31(6971) (1995) 27-29.

[14] L. Zhu, L. Li, J. Lang, 'The attitudes towards defensive medicine among physicians of obstetrics and gynaecology in China: a questionnaire survey in a national congress', *BMJ Open* 8 2018 e019752.

[15] P. Case, 'The jaded cliché of "defensive medical practice": from magically convincing to empirically (un)convincing?', *Prof Neg.* 36(2) (2020) 49-77,52.

[16] O. Ortashi, J. Virdee, R. Hassan, et al., 'The practice of defensive medicine among hospital doctors in the United Kingdom', *BMC Med Ethics* 14 (2013) 42.

that the current medico-legal environment is a cause for concern amongst surgeons in Ireland, which has implications for practice and patient safety.

2 The Medico-Legal Environment in Ireland

The way in which the medico-legal environment impacts on medical practice depends on a wide range of factors relating to the legal framework and structures in individual jurisdictions. As such, it is prudent to first provide a brief overview of the medico-legal environment in Ireland. In Ireland, where a patient safety incident occurs, a patient may have recourse to the courts should the incident meet the threshold of negligence, and/or file a complaint with the professional regulator, the Medical Council of Ireland. Less formal complaints mechanisms also exist.[17]

The volume of medical negligence litigation in this jurisdiction has grown steadily over the past number of decades with over 1,000 cases filed in the High Court annually.[18] The principles underlying the tort of negligence (duty of care; breach of duty; damage; and causation) are applicable to claims of medical negligence in Ireland. However, this particular area of law has developed and refined since *Dunne v National Maternity Hospital*,[19] a 1989 birth injury case. The growing volume of medical negligence litigation in this jurisdiction does not necessarily reflect an increase in patient safety incidents, but rather a number of factors, including a heightened awareness of patient rights.[20] As Madden observes in the context of the changing nature of the doctor-patient relationship, '[t]he old adage of "doctor knows best" has almost been consigned to the realms of the history books.'[21]

The increase in litigation and the regulation of the profession has had a significant impact on both the legal and ethical responsibilities of medical practitioners, and the practice of medicine.[22] The aggressively adversarial nature of this type of litigation has also been recognised as having a "destructive emotional impact".[23] In recognition of the burdensome nature of medical negligence litigation in Ireland, reform in this area has been considered over the past number of decades, with measures predominantly focused at targeting the temporal and financial burdens of this type of litigation.[24] More recently, an Expert Group on Tort Reform was established to review the law of torts and the current systems for the management of medical negligence claims.[25] Key recommendations of the group, mainly focused at expediting the process of litigation, included the implementation of pre-action protocols and

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[17] See for example, https://www.hse.ie/eng/about/qavd/complaints/ysysguidance/listening-responding-to-feedback/thecomplaintsprocess.html (last accessed 29/09/2021).

[18] There were 1,169 medical negligence actions commenced in the Irish High Court in 2019. See, Courts Service *Annual Report* (2019) p.48, available at www.courts.ie (last accessed 24 September 2021).

[19] *Dunne v National Maternity Hospital* [1989] IR 91. For a full discussion see, C. Craven, 'Medical negligence and the Dunne principles: what do the first and second principles mean', *Q. Rev. Tort L* 1 (2005) 1; C. Craven, 'Medical negligence and the Dunne principles: the third and later principles', *Q. Rev. Tort L* 1 (2005) 12. See also, *Fitzpatrick v White* [2007] IESC 51 for the relevant test for informed consent.

[20] M. Brazier and E. Cave, *Medicine, Patients and the Law* (Manchester: Manchester University Press, 4th edn, 2016).

[21] D.Madden, *Medicine, Ethics and the Law* (Dublin: Bloomsbury, 3rd edn, 2016) 68.

[22] *Ibid.*

[23] M. E. Tumelty, 'Exploring the emotional burdens and impact of medical negligence litigation on the plaintiff and medical practitioner: Insights from Ireland', *Legal Studies* (2021) 1.

[24] See for example, High Court Working Group on Medical Negligence and Periodic Payments, *Report on Pre-action Protocols* (Module 2) (2012); High Court Working Group on Medical Negligence and Periodic Payments *Report on Case Management in Clinical Proceedings* (Module 3) (2013).

[25] Department of Health, *Expert Group Report to Review the Law of Torts and the Current System for the Management of Clinical Negligence Claims* (2020) available at https://www.gov.ie/en/publication/ffb23-expert-group-report-to-review-the-law-of-torts-and-the-current-systems-for-the-management-of-clinical-negligence-claims/ (last accessed 24 September 2021).

case management procedures; and the establishment of a dedicated list in the High Court to medical negligence cases.[26] Alternative forms of dispute resolution, such as mediation, have also been promulgated as a method of resolving medical negligence claims in a non-contentious manner.[27] However, the majority of these claims are still litigated.[28]

Whilst the primary course of action for an individual who suffers a patient safety incident and wishes to seek redress is a civil claim for medical negligence, a patient may also file a complaint with the regulator, the Medical Council of Ireland.[29] Similar to its international counterparts, the functions of the Medical Council include: the assurance of the quality of education and training for undergraduate and postgraduate medical students;[30] registration;[31] and guidance on professional standards and ethics.[32] The Council also hold a disciplinary function.[33]

As previously noted, defensive practices can arise as a result of the threat of litigation and/or complaints. Previous studies in this area have employed surveys of physicians to gain insights into their behaviour, typically in response to the threat of medical negligence claims or attempted to track the link between defensive practices and healthcare costs.[34] However, empirical data which explores the impact of civil litigation and/or complaints on medical practice is conspicuously absent in an Irish context. This study seeks to address this gap and contribute to the international discourse in this area through a quantitative exploration (a survey) of the impact of civil litigation and complaints on surgical practice. Such insights are important in order to inform policy debates and to provide a platform for evidence-based reform.

3 Methods

This research employed a quantitative approach, with an anonymous online survey used as the method for collecting data. A 50-question survey was developed by researchers based in the University of Limerick and the Royal College of Surgeons, Ireland. No existing surveys addressed our domains of interest (civil and regulatory impact) at the time of this study. Design of the survey questionnaire was therefore informed by the literature and some previously validated questions.[35] The survey included questions on surgeon demographics and the impact of the threat of medical negligence litigation and regulatory complaints on physician behaviours. Ethical approval was obtained from the Faculty of Education and Health Sciences

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[26] *Ibid.*

[27] Mediation Act 2017.

[28] National Treasury Management Agency, *Annual Report* (2020) p52 wherein it is noted that "25% of claims concluded by the clinical claims team in 2020 where damages were paid involved a mediation process." Available at https://www.ntma.ie/annualreport2020/documents/NTMA_Annual_Report_2020.pdf (last accessed 30 September 2021). See also, A. Dowling-Hussey, 'Irish Medical Professional Negligence Claims and ADR: Still Under-used?' *Medico-Legal Journal of Ireland* 22(2) (2016) 88.

[29] The Medical Council of Ireland was established by the Medical Practitioners Act 1978, it was replaced by the Medical Practitioners Act 2007.

[30] Medical Practitioners Act 2007, s7(2)(c)-(g).

[31] Medical Practitioners Act 2007, s7(2)(a).

[32] Medical Practitioners Act 2007, s7(2)(i).

[33] Medical Practitioners Act 2007, s7(2)(j).

[34] See for example, M.S. Sekhar and N. Vyas, 'Defensive medicine: a bane to healthcare', *Ann Med Health Sci Res.* 3(2) (2013) 295-296; M.B. Rothberg, J. Class, T.F. Bishop, et al., 'The cost of defensive medicine on 3 hospital medicine services', *JAMA Intern Med.* 174(11) (2014) 1867-1868.

[35] D. Studdert, M. Mello, W. Sage, et al., 'Defensive medicine among high-risk specialist physicians in a volatile malpractice environment', *JAMA* 293(21) (2005) 2609-17; N. Summerton, 'Positive and negative factors in defensive medicine: a questionnaire study of general practitioners', *BMJ* 31(6971) (1995) 27-29; B.V. Nahed, M.A. Babu, T.R. Smith, et al., 'Malpractice liability and defensive medicine: A national study of neurosurgeons' *PLoS One* 7(6) (2012) 39237.

Research Ethics Committee at the University of Limerick. The survey was piloted with a small number of surgeons in the Royal College of Surgeons, Ireland, and subsequently was modified following feedback. Internal communications tool, Newsweaver, was used to analyse engagement with the distribution email, including the number of emails delivered and opened.

3.1 *Participants*

The survey was distributed electronically to all surgeons enrolled in the Royal College of Surgeons, Ireland (RCSI) Professional Competence Scheme (N=1,846).[36] The RCSI is the national training body for surgery in Ireland. All registered doctors practicing in Ireland for more than 30 days per year are required to enrol in a professional competence scheme and the RCSI is responsible for running the scheme for surgeons and doctors practicing in surgery and emergency medicine.

Demographic and practice-related information was gathered including: gender, number of years post-graduation, country where undergraduate training was undertaken, surgical speciality, type of register (specialist or general) and whether the primary area of practice was public hospital only, private hospital or mixed public/private practice. The number of annual operative cases were also recorded.

3.2 *Statistical analysis*

Categorical variables are summarised using counts and percentages. The Z-test for proportions was used to test for differences in percentages across two groups. Rating scales are summarised using medians and quartiles. Median ratings across two independent groups were compared using the Mann-Whitney U test. A 5% level of significance was used for all tests and there was no adjustment for multiple testing. All analysis has been carried out using SPSS for Windows Version 25.

[36] https://www.rcsi.com/surgery/practice/professional-competence-scheme (last accessed 29 September 2021).

4 Research Findings

Of the 1,846 on the mailing list, 1,251 opened the invitation to participate in the survey, and 157 (12.5%) of these responded. The characteristics of respondents are summarised in Table 1.

Table 1 - Characteristics of respondents (n=157)

Characteristic	**n (%)**
Gender	
Male	133 (84.7%)
Female	23 (14.6%)
Prefer not to answer	1 (0.6%)
Undergraduate Medical Training completed in	
Ireland	100 (63.7%)
Other European country	14 (8.9%)
Africa	22 (14.0%)
Asia	21 (13.4%)
Duration since graduation	
< 15 years	51 (32.5%)
≥ 15 years	106 (67.5%)
Surgical specialty	
General surgery	58 (36.9%)
Trauma and orthopaedic surgery	30 (19.1%)
Plastic and reconstructive surgery	14 (8.9%)
ENT surgery	11 (7.0%)
Cardiothoracic surgery	10 (6.4%)
Urology surgery	10 (6.4%)
Vascular surgery	6 (3.8%)
Emergency surgery	5 (3.2%)
Oral and Maxillofacial surgery	4 (2.5%)
Paediatric surgery	3 (1.9%)
Other	6 (3.8%)
Register [*]	
Specialist	109 (69.9%)
General	46 (29.5%)
Training register	1 (0.6%)
Primary area of practice	
Public hospital only	72 (45.9%)
Private hospital only	20 (12.7%)
Mixed public/private	60 (38.2%)
Not in clinical practice	5 (3.2%)
Number of annual operative cases	
≤ 100	13 (8.3%)
101-300	32 (20.4%)
301-600	39 (24.8%)
601-900	29 (18.5%)
901-1200	15 (9.6%)
> 1200	29 (18.5%)

* n=156, one respondent with missing data

The percentage of female respondents (15%) is broadly representative of surgery in Ireland (10% female).[37] The majority of respondents (100/157, 64%) had completed their undergraduate medical training in Ireland and had graduated more than 15 years ago (106/157, 68%). The most common specialities were general surgery (58/157, 37%) and trauma and orthopaedic surgery (30/157, 19%) which reflects surgeon employment across specialties in the national healthcare provider in Ireland.[38] The majority (109/157, 70%) of respondents were on the specialist register and over half (80/152, 53%) had at least some private practice. Almost one in five respondents (29/157, 19%) had more than 1200 operative cases a year.

4.1 *Medical negligence claims*

As previously noted, despite the high burden of proof which must be met in order to establish a claim of negligence,[39] the volume of medical negligence litigation in Ireland is steadily increasing. Whilst claims of this kind were virtually non-existent in Ireland until the late 1980s,[40] the volume of medical negligence litigation has since consistently grown in this jurisdiction with more than 1,000 medical negligence actions commenced annually in the Irish High Court.[41] An adversarial process, the aggressive nature of medical negligence litigation in this jurisdiction frequently attracts criticism, as such cases often lead to 'protracted, contentious, emotionally draining and expensive legal battle[s]'.[42]

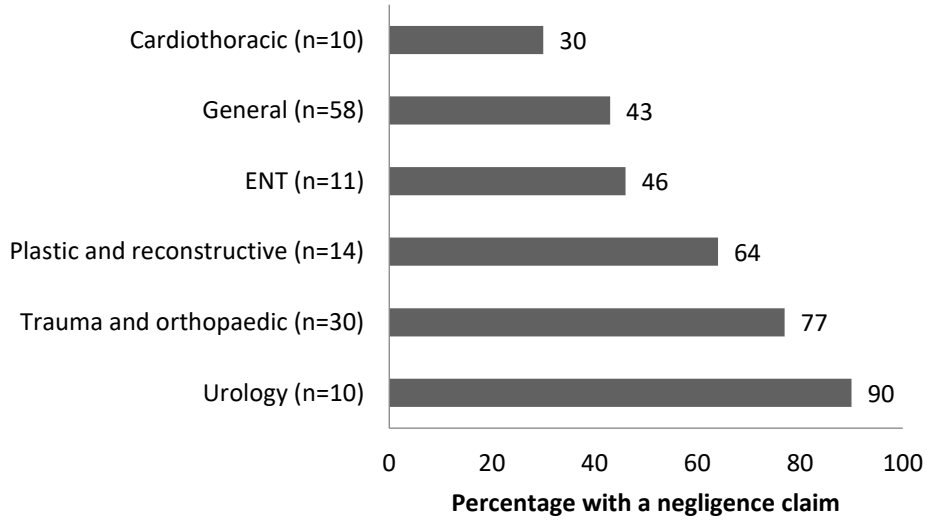
In the present study, 82/157 (52%) respondents reported that they had a medical negligence claim made against them (including claims that were dropped, settled out of court or proceeded to trial). The percentage with a claim made against them varied by speciality (Figure 2) with higher rates in urology, trauma and orthopaedic, and plastic and reconstructive surgery.

Interestingly, those in private practice experienced higher levels of claims than their colleagues working in the public sector. Those working in public hospitals only (n=72) were less likely to have had a claim made against them compared to those with at least some private practice (n=80) [22/72 (31%) for public hospital vs 59/80 (74%) for some private practice; p <0.001]. This may be reflective of the differing socio-economic backgrounds of public and private patients, including access to legal advice and representation,[43] higher expectations

[37] Royal College of Surgeons, Ireland, *Progress: Promoting Gender Equality in Surgery* (Dublin: RCSI, 2017).
[38] HSE.ie [internet]. Approved Consultant Post numbers March 2019; [accessed 2020 Nov] Available from https://www.hse.ie/eng/staff/leadership-education-development/met/consultantapplications/rep1/approved-consultant-numbers-by-medical-discipline-report-31-march-2019.pdf.
[39] M. Brazier and E. Cave, *Medicine, Patients and the Law* (Manchester: Manchester University Press, 4th edn, 2016) 229.
[40] W. Binchy, 'Tort Law in Ireland: A Half-Century Review', *Ir Jur.* 56 (2016) 199,205.
[41] Courts Service, *Annual Report* (Dublin: Court Service, 2019) 48.
[42] M. Boylan, 'Medical Accidents: Is Honesty the Best Policy? Time for a Legal Duty of Candour?', *MLJI.* 2 (2012) 62-67.
[43] There is some legal aid available for medical negligence claims in Ireland. The Medical Negligence Unit deals with medical negligence claims from those who are eligible for legal aid. In order to obtain legal aid for civil matters in Ireland a prospective client must have an annual disposable income not exceeding €18,000. For further detail see, Civil Legal Aid Act 1995, s 28; FLAC, *Report on Civil Legal Aid in Ireland Forty Years On* (2009).

about the level of care within the private sector or the desire to recover any costs arising from medical negligence.[44]

Figure 1 Percentage with a medical negligence claim made against them by speciality[1]



[1] For specialties with at least 10 respondents

The findings of our research indicate that the threat of litigation alters how some of these surgeons view their patients and consequently, their behaviours. When asked how concerns about potential medical negligence litigation impacted on practice, all respondents reported practising at least one defensive medicine behaviour occasionally. Assurance behaviours in response to the threat of potential medical negligence litigation were widespread amongst respondents. The majority reported that they frequently or always actively sought to communicate with a patient after an adverse event (128/146, 88%), provided more detailed explanations to patients (122/146, 84%), took more detailed notes (118/146, 81%) and ordered more tests (83/146, 57%) (Figure 2). Some practices, such as more detailed notetaking and actively seeking to communicate with a patient, are clearly beneficial, contributing to an ethos of open and honest communication with patients. However, other behaviours such as the ordering of clinically unnecessary tests and referring for additional opinions are problematic. As Raposo surmises 'more medicine is not necessarily good medicine.'[45] This is because such actions may expose the patient to further unnecessary risk(s) and contribute to healthcare costs more generally. Tancredi and Barondess explain, '[p]ositive defensive medicine may not only result in an inflation of health care costs through the overuse of laboratory and treatment facilities, but may also expose patients to the risks of adverse outcomes from the procedures themselves.'[46]

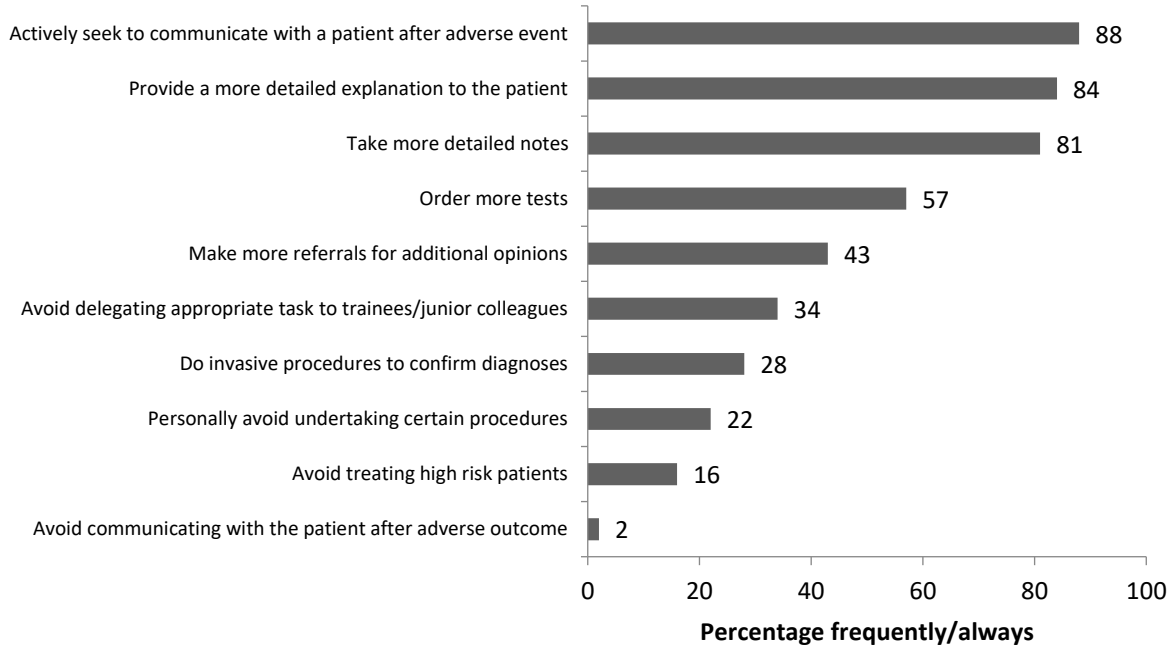
Avoidance behaviours whilst rarer than assurance behaviours, were also evident in our survey in response to both the fear of litigation and complaints. Over one in five reported that they personally avoided undertaking certain procedures (32/146, 22%) or they carried out

[44] M. Brazier and E. Cave, *Medicine, Patients and the Law* (Manchester: Manchester University Press, 4th edn, 2016) 229.
[45] V. L. Raposo, 'Defensive medicine and the imposition of a more demanding standard of care', *Journal of Legal Medicine* 39 (2019) 401, 404.
[46] L. R. Tancredi and J. A. Barondess, 'The problem of defensive medicine', *Science* 200(4344) (1978) 879.

invasive procedures e.g. biopsies to confirm diagnoses (41/146, 28%). Ordering clinically unnecessary tests (assurance) and doing invasive procedures (avoidance) to confirm diagnoses increase patient risk and healthcare costs. Such actions are particularly problematic where a patient is unnecessarily exposed to risk of harm.[47] These practices also have a significant impact on patient autonomy and the quality of care provided, where, for example, they restrict patient choice.[48] Finally, a significant number of respondents viewed their interactions with patients as a risk with 60/145 (41%) saying they always or frequently viewed patients as a potential lawsuit. This will inevitably change the dynamic of the interaction between the doctor and patient, often leading to defensive practice(s). As Sekhar and Vyas note, 'defensive medicine also paves way for degradation of the physician and patient relationship.'[49]

Notably, there were no differences in the behaviours of those who had a claim made against them compared to those who hadn't, except for delegation of appropriate tasks to trainees or more junior colleagues. Those who had a previous claim were more likely to frequently or always avoid delegation of appropriate tasks compared to those who hadn't [32/76 (42%) vs. 18/70 (26%); p=0.04]. This may suggest that the impact of the medico-legal and regulatory culture has permeated medical practice, irrespective of individual experience.

Figure 2 Does concern about potential medical negligence litigation cause you to do any of the following (percentage who reported frequently or always) (n=146)[1]



[1] 5 not in clinical practice and 6 with missing data

[47] E. Asher et al., 'Defensive medicine in Israel – a nationwide survey', *PLoS ONE* 7(8) (2012) e42613.
[48] J. C. Bester, 'Defensive practice is indefensible: how defensive medicine runs counter to the ethical and professional obligations of clinicians', *Medicine, Health Care and Philosophy* 23 (2020) 413.
[49] S. Sekhar and N. Vyas, 'Defensive medicine: a bane to healthcare', *Annals of Medical and Health Sciences Research* 3(2) (2013) 295.

When asked to rate on a scale of 0 to 100 how worrying the threat of medical negligence litigation is to them, the median rating of respondents was 67 (first quartile=29, third quartile=90). The median rating was higher for those who hadn't a claim made against them (median of 70 compared to 53 for those with a claim, p=0.05).

Over a third (47/137, 34%) of respondents were considering early retirement as a result of the current medico-legal climate in Ireland and 49% (69/141) knew of colleagues who had already retired early because of this. One in five (30/145, 21%) would consider emigrating due to fear of being sued and 36% (51/141) knew of colleagues who had emigrated because of the current medico-legal climate. There were no differences in perceptions between those who had a claim made against them compared to those who hadn't.

The impact on career choices and how these surgeons perceived their future within the profession was also notable. Respondents reported considering retiring early or emigrating themselves or knowing colleagues who had left medical practice in Ireland as a result of the current medico-legal and regulatory environment at a time when the Health Service is struggling to recruit suitably qualified medical professionals, further incentivising the need for reform.[50] Some respondents reporting considering retiring early (47/137, 34%) or emigrating (30/145, 21%) due to the medico legal environment or knowing colleagues who had retired early or emigrated (69/141, 49% ; 51/141, 36%). Previous international research in this area has indicated that early retirement is a prevalent response to medico-legal culture.[51] Interestingly, in Ireland, in a recent Medical Workforce Intelligence Report the Medical Council did not explore the impact of the regulatory or medico-legal culture quantitatively in their study of recruitment and retention issues, however the issue was raised in qualitative comments.[52] At a time when the Irish healthcare system is understaffed and struggling to recruit suitably qualified staff,[53] any drain of expertise as a direct result of the medico-legal environment is to be regretted.

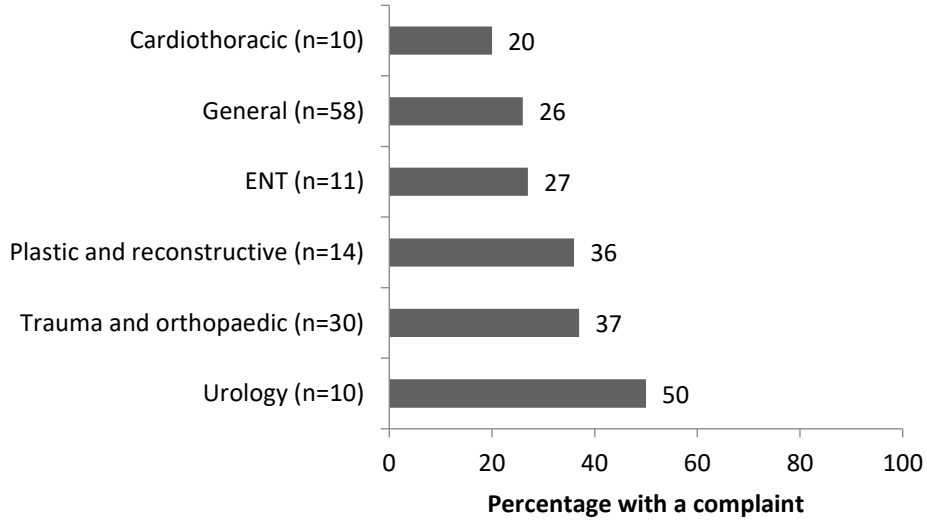
4.2 *Medical council complaints*

As previously noted, an alternative to a civil action for medical negligence following a patient safety incident is recourse to the national regulatory body. Similar to its international counterparts, the Irish Medical Council may hear complaints in relation to alleged professional misconduct, poor professional performance, and/or relevant medical disability on the part of a medical practitioner.[54] In the context of the present study, 49/157 (31%) had been the subject of a complaint to the Medical Council during their career. The percentage with a complaint varied by speciality (Figure 3) with higher rates in urology, trauma and orthopaedic, and plastic and reconstructive surgery. The dichotomy in the experience of civil litigation between those operating in public and private healthcare was replicated in the findings on complaints to the regulatory body. Those working in public hospitals only (n=72) were less likely to have been the subject of a complaint compared to those with at least some private practice (n=80) [12/72 (17%) for public hospital vs 37/80 (46%) for some private practice; p <0.001]. Again, while

[50] Irish Medical Council. *Medical Workforce Intelligence Report*: *A Report on the 2019 and 2020 Annual Registration Retention & Voluntary Registration Withdrawal Surveys*, (Dublin: Irish Medical Council, 2020).
[51] D. LeFever, A. Demand, S. Kandregula, at al., 'Status of current medicolegal reform in the United States: a neurosurgical perspective' *Neurosurgical Foc* 49(5) (2020) 1.
[52] Irish Medical Council, *Medical Workforce Intelligence Report*: *A Report on the 2019 and 2020 Annual Registration Retention & Voluntary Registration Withdrawal Surveys*, (Dublin: Irish Medical Council, 2020).
[53] E. Loughlin, 'Over 720 consultant posts vacant in the health service' *Irish Examiner* (27 September 2021); M. Wall, 'Almost 730 consultant posts vacant, say doctors' *The Irish Times* (30 November 2020).
[54] The Medical Practitioners Act 2007 repealed the Medical Practitioners Act 1978 and introduced a number of changes, including a new ground of complaint: poor professional performance.

the origins of this phenomenon remain unclear, it is a topic worthy of further exploration if we are to ameliorate the impact of the current medico-legal and regulatory culture on the practice of medicine.

Figure 3 Percentage who were the subject of a complaint to the Medical Council by speciality[1]



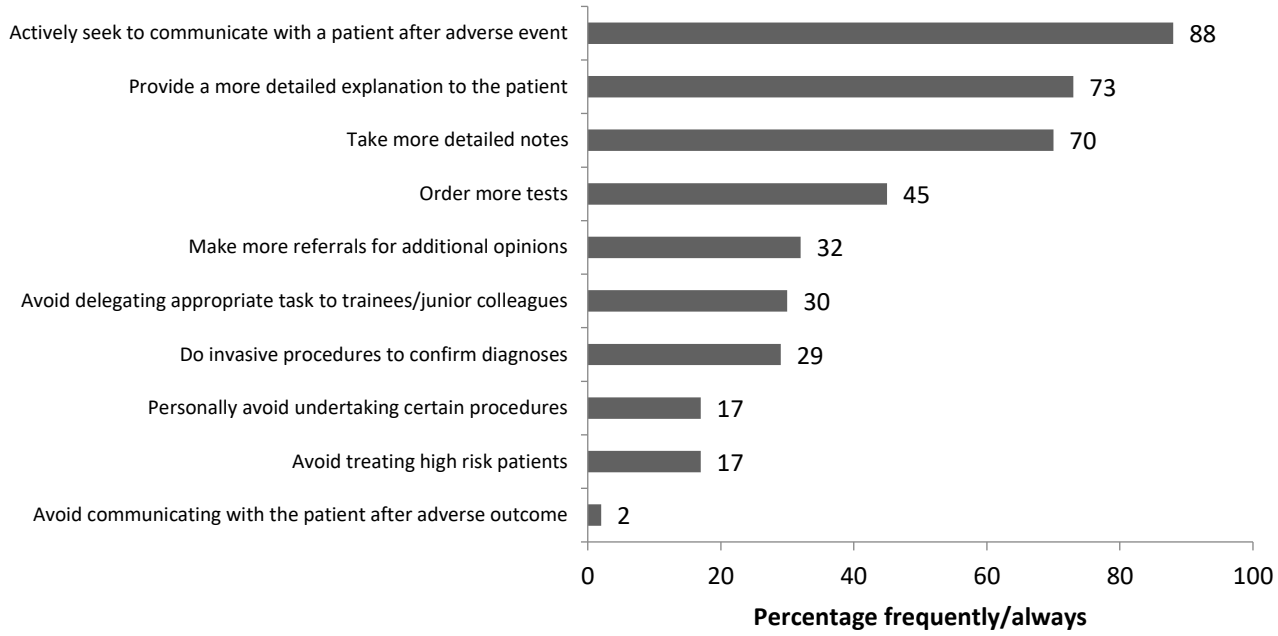
[1] For specialties with at least 10 respondents

Although the majority of studies in this area have focused on the impact of medical negligence litigation on medical practice, an emerging body of research has reported that physicians invoke defensive practices in an attempt to avoid the unpleasantness of enduring a complaints procedure.[55] For example, in a qualitative study of Danish GP's, concerns about regulatory complaints were noted as an impetus for defensive practices.[56] Similarly, assurance and avoidance behaviours in response to fear of complaints were also reported in our research. When asked about the how concerns about potential Medical Council complaints impacted on practice, the majority reported that they frequently or always actively sought to communicate with a patient after an adverse event (123/139, 88%), provided more detailed explanations to patients (101/139, 73%) and took more detailed notes (97/139, 70%) (Figure 4). Over a quarter reported that concerns about potential complaints caused them to frequently or always carry out invasive procedures e.g. biopsies to confirm diagnoses (40/139, 29%). Again, whilst some assurance behaviours such as providing more detailed explanations to patients help to contribute to a culture of candour, other actions are problematic where patients are exposed to further risk.

Figure 4 Does concern about potential Medical Council complaint cause you to do any of the following (percentage who reported frequently or always) (n=139)[1]

[55] See for example, W. Cunningham and H. Wilson, 'Complaints, shame and defensive medicine' *BMJ Qual Saf.* 20(5) (2011) 449-52; O. Ortashi, J. Virdee, R. Hassan, et al., 'The practice of defensive medicine among hospital doctors in the United Kingdom' *BMC Med Ethics* 14 (2013) 42; T. Bourne et al., 'The impact of complaints procedures on the welfare, health and clinical practise of 7926 doctors in the UK: a cross-sectional survey', *BMJ Open* 5(1) (2015) e006687.

[56] E. Assing Hvidt et. al, 'How is defensive medicine understood and experienced in a primary care setting? A qualitative focus group study among Danish general practitioners', *BMJ Open* (2017) 7(12) e019851.



[1] 5 not in clinical practice and 13 with missing data

When asked to rate on a scale of 0 to 10 how worrying the threat of a Medical Council complaint is to them, the median rating of respondents was 6 (first quartile=4, third quartile=9). The median rating was higher for those who had had a complaint made against them (median of 8 compared to 5 for those without a complaint, p=0.02). Even though a smaller percentage of respondents (49/157, 31%) had been subject to a complaint in their career, 105/138 (76%) respondents reported that they would be more worried or somewhat more worried about a complaint than a medical negligence claim. This is perhaps explained by the personal nature of complaints, whereas the majority of surgeons facing a medical negligence claim will be indemnified and therefore, may have little personal involvement in the litigation. The Medical Council also has the ultimate power to revoke a doctor's licence to practice,[57] a sanction which threatens the livelihood of the physician.

An interesting finding of this research is the difference in attitude and behaviour between those who had been the subject of a complaint to the Medical Council and those who had not. While there was only one statistically significant difference in behaviour in that those who had been the subject of a complaint were more likely to frequently or always personally avoid conducting certain procedures or interventions compared to those who hadn't (12/44, 27% vs 11/95, 12%; p=0.02) insights into the impact on the beliefs and attitudes of surgeons were also instructive. Those who had been through the process were more worried about a future complaint (median of 8 compared to 5 for those without a complaint). Most respondents (119/138, 86%) reported that they would or probably would confide in a colleague if they had been the subject of a complaint to the Medical Council. However, the majority (93/138, 67%) did not agree that there were adequate supports in place for physicians who face investigation or disciplinary action before the Medical Council and those who had been subject to a complaint were more likely not to agree [37/43 (86%) of those who had had a complaint made against them compared to 56/95 (59%) of those who hadn't; p=0.002). This has implications for the Medical Council, particularly given its stated aim of ensuring that the process of

[57] Medical Practitioners Act 2007, s.71(f).

regulation both protects the public and supports medical practitioners.[58] It seems clear that additional supports should be put in place to support surgeons. In a qualitative study conducted by Pinto et al. on the impact of complications in surgery on surgeon's well-being, participants suggestions for an improved support structure included formal mentorship, time-off following major complications, better teamwork structures, a human factors approach to managing the consequences of complications, and access to confidential psychological services.[59] This is particularly important given the body of research emerging which evidences the severe and long-lasting impact a patient safety incident may have on a medical practitioner,[60] with the term 'second victim' gaining international recognition.[61]

4.3 **Limitations**

The low response rate limits our ability to use these findings to estimate the prevalence of these behaviours in the population of surgeons of Ireland. It may be that those who responded felt more strongly about the topic or had more experience of litigation/ complaints than those who didn't respond. As Case has noted 'those volunteering to be surveyed… are more likely to identify with the negatives of liability'.[62] Another limitation of this research is the self-reporting nature of the survey, as participants may have provided what they perceive to be 'socially desirable' answers and thus, views and understandings may differ from practice.[63] However, as this study sought to explore and extrapolate perceptions and the impact of these perceptions on practice, a survey was an appropriate method to gain insights into the phenomenon of defensive medicine.

5 **Conclusion**

This article presents empirical findings from a survey of surgeons in Ireland. Whilst the difficulties in ascertaining the true nature and existence of defensive medicine are acknowledged,[64] the results of this study indicate that concern exists amongst surgeons in Ireland in relation to the current medico-legal environment. This paper has provided an insight into the types of defensive practices adopted amongst a sample of surgeons in Ireland and explored variances in these practices in response to the civil and regulatory environments. The results of this survey indicate that some surgeons in Ireland have adopted both assurance and avoidance behaviours as a means of mitigating against the possibility of litigation and/or complaints.

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[58] Irish Medical Council, *Annual Report and Financial Statements,* (Dublin: Irish Medical Council, 2019).
[59] A. Pinto, O. Faiz, C. Bicknell, et al., 'Surgical complications and their implications for surgeons' well-being', *Br J Surg.* 100(13) (2013) 1748-55.
[60] A.W. Wu, 'Medical error: the second victim: the doctor who makes the mistake needs help too', *BMJ* (2000) 726-27; A.W. Wu and R.C. Steckelberg, 'Medical error, incident investigation and the second victim: doing better but feeling worse?' *BMJ Qual Saf.* (2012) 21(4) 267-70.
[61] Whilst the term 'second victim' is internationally recognised, an emerging body of research has argued that the term should be replaced. See, M.D. Clarkson, H. Haskell, C. Hemmelgarn, et al., 'Abandon the term "second victim".', *BMJ* (2019) 364 1233; M.E. Tumelty, 'The second victim: A contested term?' *Journal of Patient Safety* (2018) doi: 10.1097/PTS.0000000000000558 [published Online First: 18 December 2018].
[62] P. Case, 'The jaded cliché of "defensive medical practice": from magically convincing to empirically (un)convincing?' *Prof Neg.* 36(2) (2020) 49-77.52.
[63] P.S. Brenner, J. DeLamater, 'Lies, damned lies, and survey self-reports? Identity as a cause of measurement bias', *Soc Psychol Q* 79(4) (2016) 333.
[64] For a discussion on the problematic nature of defensive medicine see, M.J. Saks and S. Landsman, 'The paradoxes of defensive medicine', *Health Matrix* 30 (2020) 25.

Whilst a detailed discussion on reform of the current medico-legal environment is outside the scope of this article, the findings of this research add further support to the argument that appropriate supports need to be in place for physicians who face investigation in relation to their practice.[65] Given the increasing emphasis on cultivating a 'no blame' culture, that encourages learning and reflection from patient safety incidents in order to contribute to the important goal of increased patient safety,[66] the findings of this research suggest that further investigation into the impact of current medico-legal and regulatory culture on medical practice and physician well-being is warranted.

[65] See for example, A. W. Wu, 'Medical error: the second victim: the doctor who makes the mistake needs help too', *BMJ* 320 (2000) 726.

[66] M. Maclean, 'The many advantages and some disadvantages of a no-blame culture regarding medical errors' in B. Hurwitz and A. Sheikh (eds), *Health Care, Errors and Patient Safety* (Oxford: Wiley-Blackwell, 2009); Patient Safety (Notifiable Patient Safety Incidents) Bill 2019.