Review of Malpractice Settlements and Awards from 2008–2018 in Rhode Island

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ABSTRACT

OBJECTIVES: To determine the rates and characteristics of physicians with medical malpractice adverse outcomes in Rhode Island.

METHODS: A descriptive epidemiologic study of medical malpractice claims from 2008–2018 aggregated by the Board of Medical Licensure and Discipline of the Rhode Island Department of Health. To examine the demographic characteristics of physician malpractice cases we reviewed 10 years of data from Rhode Island medical malpractice lawsuits that were resolved, in whole or in part, via payment to the plaintiff.

RESULTS: Over this 10-year period, there were 460 such cases, 88% of which involved a male physician and 48% of which involved surgical category specialists. Few cases, 17.6% of payments, were over one million dollars, and the mean payment value across all cases was $517,104. The rate of paid claims was found to be stable over the period studied.

KEYWORDS: Medical malpractice

INTRODUCTION

The mission of the Rhode Island Board of Medical Licensure and Discipline (BMLD) is to protect the public through enforcement of standards for medical licensure and ongoing clinical competence.[1] Malpractice insurance[2] is required for every practicing physician in Rhode Island. Physicians must be prepared to produce proof of malpractice coverage upon request, and every insurer is required to send formal notice to the BMLD of all medical malpractice claims as well as the settlement of or judgement awarded on all such claims.[3]

Medical malpractice lawsuits are a relatively common occurrence in the United States.[4] Forty-two percent of US physicians have been sued for malpractice during the course of their careers.[5] To prevail on a claim of medical malpractice, the plaintiff must establish four legal elements: (1) the existence of a physician-patient relationship giving rise to a duty; (2) violation of the applicable standard of care; (3) injury or damage; and (4) a causal relationship between the violation of the standard of care and the alleged harm.[4] Other factors, unrelated to the legal elements, have been shown to impact the risk to practitioners of malpractice claims, such as the quality of the patient-physician relationship and the practitioner's specialty, with specialties which perform more procedures being higher risk, as well as the performance of specific procedures.[6,7]

A 2021 Medscape survey confirms that malpractice claims are more frequently made against surgical specialties, with plastic surgery, general surgery, orthopedics, urology, Ob/gyn making up the top five survey specialties reporting that they have been named in a malpractice suit.[8] Malpractice lawsuits are an important legal recourse for patients harmed during medical treatments/diagnostics/interactions. The consequences of malpractice claims are often devastating to physicians, as they have immediate financial implications and can cause harm to their reputations and adversely impact their ability to practice.[8] Beyond the professional harm, malpractice suits are independently associated with physicians reporting increased symptoms of burnout and depression, though it is unknown if this association is causal.[9] The fear of malpractice suits can also lead to defensive medicine practices, which include the performance of unnecessary and costly diagnostic and non-diagnostic procedures, as well as the omission of indicated, but potentially high-risk non-diagnostic procedures. The total costs have been estimated to contribute billions of dollars per year to total healthcare expenditures in the US.[10,11] Despite widespread understanding of the legal elements of a malpractice claim, there is a great deal of uncertainty among physicians regarding their own risks and potential outcomes of malpractice lawsuits.[4] This case-control study reviews the characteristics of physicians with medical malpractice adverse outcomes in Rhode Island, to identify physicians with higher risk characteristics of adverse outcomes and, thereby, provide an opportunity to physicians to mitigate or eliminate perceived risks and reduce the likelihood of future lawsuits.

METHODS

Malpractice suits and settlements/awards were extracted from reports submitted to the BMLD by insurance carriers and the National Practitioner Data Bank (NPDB). This data set does not differentiate settlements from court-awarded damages, and only the final amounts of the settlements or court awarded damages were collected. This paper refers to these collectively as "settlements" or "awards." Licensing information regarding physician age, gender, and specialty

was compiled from the Rhode Island Department of Health (RIDOH) physician licensing database for the period of January 1, 2008, to December 31, 2018.

Individual specialties were categorized in two broad specialty groups: medical and surgical. The dollar amounts of settlements/awards were categorized into three ranges – low, medium, and high– based on the dollar amount of the award; low (<$200,000), medium (>$200,000, but <$1,000,000), and high (>$1,000,000). These ranges were previously set by the BMLD.

Duplicate settlements/awards in the BMLD and NPDB data were merged, but each settlement for a single physician was treated as a separate item.

Comparison of specialty category, gender, and age of physicians with settlements/awards to the licensed physician population in Rhode Island was done using publicly available and searchable licensee information from (RIDOH).

To analyze the stability of the rate of malpractice adverse outcomes over time we used Statistical Process Control (SPC) charts. SPC charts are a tool used to detect nonrandom variation in rates measured over time. The SPC chart we used is an XmR chart. The analysis used in XmR charts make no assumption regarding the distribution of the data. Our analysis included standard XmR rules to detect any point outside of the control limit, which is set at three standard deviations from the mean. Additionally, we applied The Western Electric (WE) statistical process control chart rules, which also detect two out of three successive points beyond a 2-sigma limit (two- thirds of the distance between the center line and the control line), four out of five successive points beyond a 1-sigma limit, or eight or more successive points on one side of the center line. Using an XmR chart with this set of rules has been shown to perform well at identifying both statistically significant outliers as well as trends.[12] Rates that fall outside these control limits and rules would suggest a special cause variation, meaning a change in the process of malpractice.

RESULTS

Table 1 summarizes our main results, and **Table 2** details adverse outcomes by specialty. After removing duplicates, 460 settlements/awards were found between 2008 and 2018.

Table 1. Main Findings

The number of malpractice adverse outcomes by specialty group and gender in Rhode Island, as well as the number of actively licensed physicians in those categories

	Malpractice Adverse outcomes N (% of total)	Actively Licensed Physicians N (% of total)
N Surgeons (%)	221 (48%)	936 (17.2%)
N Male (%)	402 (87%)	3,883 (64%)
N Male Surgeons	196 (43%)	644 (11.8%)
Total	460	6,103
Mean settlement/award value	**$517,104**	

Table 2. Adverse outcomes by specialty

All specialties with malpractice settlements, the number of physicians licensed, and the number with malpractice settlements, as well as the mean settlement range of that specialty.

Specialty	Licensed Physicians in Rhode Island	N Physicians with Malpractice	Mean Settlement Range
Allergy & Immunology	15	1	low
Anatomic & Clinical Pathology	148	6	medium
Anatomic Pathology	54	4	medium
Anesthesiology	168	11	medium
Cardiovascular Disease (Internal Med)	43	13	medium
Child & Adolescent Psychiatry	26	1	medium
Colon & Rectal Surgery	3	2	medium
Dermatology	87	5	low
Diagnostic Radiology	272	18	medium
Emergency Medicine	271	20	medium
Family Practice	393	28	medium
Gastroenterology (Internal Med)	31	7	medium
Hematology (IM:Path)	20	1	high
Internal Medicine	1064	66	medium
Maternal Fetal Medicine	1	1	high
Neurological Surgery	27	9	medium
Neurology	169	7	medium
Obstetrics & Gynecology	197	51	medium
Occupational Medicine (Preventive Med)	10	1	low
Ophthalmology	98	8	medium
Orthopaedic Surgery	102	17	medium
Otolaryngology	35	6	high
Pediatric Emergency Medicine	14	1	medium
Pediatrics	343	7	medium
Physical Medicine & Rehabilitation	26	1	medium
Plastic Surgery	24	4	low
Psychiatry	249	8	medium
Pulmonary Disease (Internal Med)	57	4	medium
Radiation Oncology	25	1	low
Radiology	45	5	medium
Surgery	156	43	medium
Thoracic Surgery	9	6	medium
Urology	37	12	medium

Actual verdicts were rare, at <5, because of RIDOH's small numbers policy, the specific number is not reported. There were 402 (88%) adverse outcomes against male physicians; 221 (48%) adverse outcomes were against physicians in surgical specialties. The overall mean settlement/award amount was $517,104. The mean settlement/award amount against men was $519,599, compared to $499,814 against women. Against physicians in surgical specialties, the mean amount was $544,685, compared to $491,601 against physicians in medical specialties. It is not known in this study how many malpractice claims were made, only the final number of adverse outcomes (including both settlements and awards) are available.

Age was categorized by decile, and the mode age for adverse outcomes was the 5th decade of life for all physicians. **Figure 1** shows gender distribution by age decile, which shows that the mode for female physicians was the 4th decade of life, and for male physicians was the 5th decade of life.

Figure 2 shows the settlement/award range by specialty category, and **Figure 3** breaks down settlement/award range by gender.

Figure 4 shows a SPC X chart[14] of the annual rate of malpractice adverse outcomes. There were no points or trends that fell outside the control limits, or rules, meaning there was no special cause variation, and that this is a process in statistical control. Future rates would be predicted to fall within the control limits, with a lower limit of 22.7 and an upper limit of 61 settlements/awards per year.

In 2017, there were a total of 6,103 actively licensed physicians in Rhode Island, 5,126 of whom self-reported their specialty to the BMLD. Of that number, 794 physicians were categorized in the surgical specialty category (15% of physicians who reported their specialty). Of the 6,103 licensed physicians, 3,883 were male (64%). Using a chi squared test of proportion, there were statistically significant greater proportions of surgeons and males with settlements/awards compared to the general licensee population with a p<0.0001.

Figure 1. Malpractice adverse outcomes by age decile and gender.

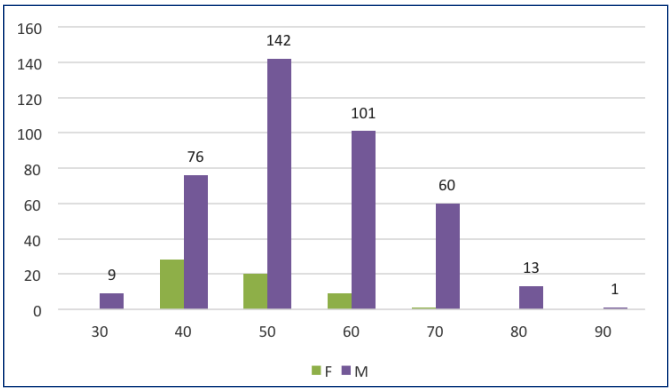


Figure 2. The number of malpractice adverse outcomes by settlement range and specialty group.

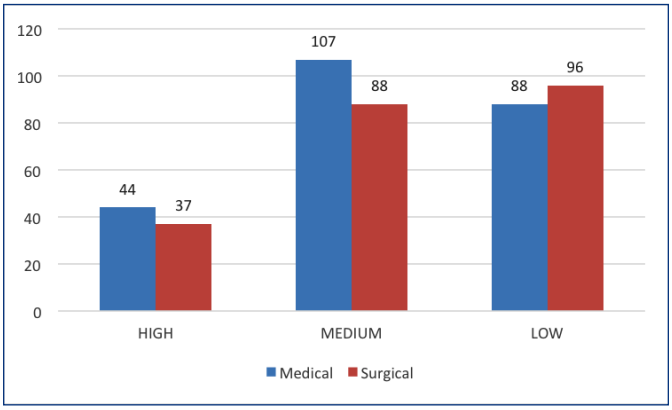


Figure 3. The number of malpractive adverse outcomes by settlement range and gender.

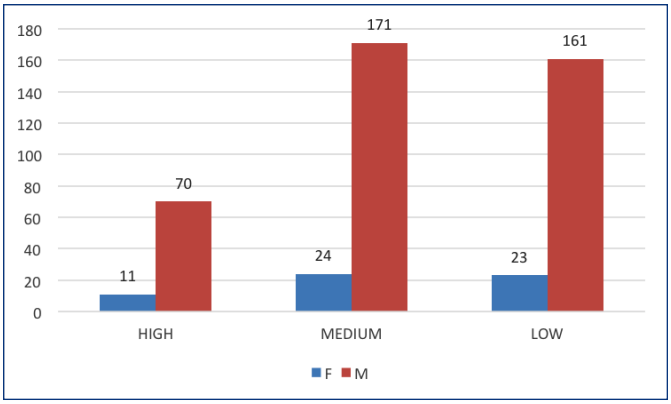
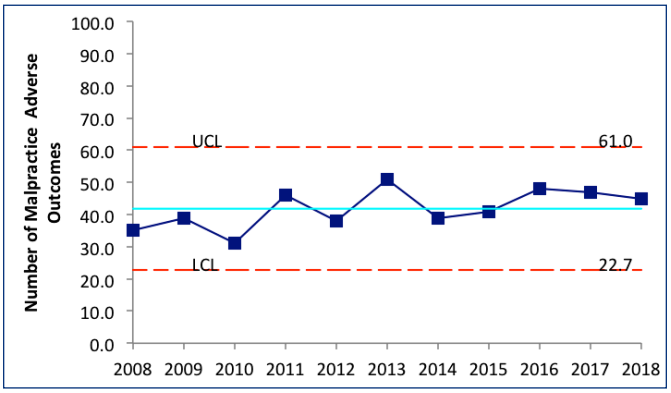


Figure 4. The X chart from an XmR chart, which shows the rate of malpractice adverse outcomes per year. The statistical detection rules applied for this chart are enumerated in the methods section, and are intended to detect significant outliers as well as trends.



DISCUSSION

It has been previously noted that medical malpractice claims in the United States are relatively common,[4] with just roughly 4 in 10 US physicians having claims made against them for malpractice during the course of their careers.[5] In

our Rhode Island data set, over a 10-year period, there were 460 malpractice cases with monetary settlements/awards, or approximately 46 per year. The rate of malpractice settlements/awards per licensed physician is approximately 0.9% of actively licensed physicians per year. This rate is comparable to national rates of malpractice from between 2009 to 2014, which was 0.89% of licensed physicians per year during that period (8.9 per 1000 physician-years).[15]

We have previously published data on disciplinary actions in Rhode Island across a similar period (2012–2017). We showed that the rate of disciplinary actions by the BMLD was 34.5 per year or 0.6% of licensed physicians per year.[15,16] It should be noted that while there is some overlap between disciplinary cases and malpractice cases, the basis for establishing professional discipline is different from those for establishing malpractice, and external forces, such as cost of litigation and induced settlement of malpractice cases may influence the outcome of a malpractice claim. While similar behaviors might eventually justify both a successful malpractice claim and disciplinary action, it is perhaps surprising that disciplinary actions are less frequent than successful malpractice claims. The framework used by the BMLD for disciplinary actions is currently based on a Just Culture and was codified in 2019.[17]

Annual surveys of physicians suggest that Rhode Island is not among the top 10 states for malpractice lawsuits against physicians.[8] While our study does not compare damages to other states, during the period of our study, there were only 81 payments (17.6%) over one million dollars out of 460 settlements/awards. Settlements/awards over one million dollars were relatively uncommon among surgical specialties – 37 out of 221 (16.7%), among medical specialties, 44 out of 239 (18.4%), among men, 70 out of 402 (17.4%), and among women, 11 out of 58 (19.0%). These differences were not found to be statistically significant.

A similar number of physicians in each specialty category had malpractice adverse outcomes against them, and the amounts of the settlement/award were also similar. Considering the smaller number of licensed surgeons, however, there was a statistically significant increased proportion of surgeons with settlements/awards against them. This is consistent with previously published data,[18] as surgeons would be expected to perform more procedures, which places them at greater risk for malpractice claims relative to their medical colleagues.[19]

Less intuitively, though consistent with previously published Rhode Island data[16], male physicians were more likely than their female colleagues to have medical malpractice settlement/awards against them.

Our study shows that, across the period of the study, the number of settlements/awards is stable, that there is no special cause variation, and that this is a process that is in statistical control. That said, the annual rate in **Figure 4** appears to show a trend towards increasing numbers of malpractice settlements/awards. Prior studies that have looked at a longer time frame have shown an increase in the number of malpractice settlements/awards over time, and it is possible that with a longer period of study the data in Rhode Island would confirm this.[15]

LIMITATIONS

Our study does not directly compare rates of settlements/awards to other states, but Rhode Island's rate is consistent with nationally published data.[15]

While all the BMLD's data relative to successful malpractice claims were treated equally, as only the number of settlements and judge or jury awarded amounts were available, the total number of malpractice claims is unknown. Not knowing how many claims were made, we cannot calculate whether gender or specialty category are more likely to be sued.

In previously published data, Rhode Island has been found to have a higher rate of settlements compared to court-awarded damages than other states.[20] With respect to the data under study, here, because of rules pertaining to data privacy, it is only known that less than 1% of cases went to verdict, with the majority having been settled out of court.

While our study looks at specialty and demographic risk factors for malpractice, other studies have shown that there are elements to the therapeutic relationship and behavioral elements that may increase the risk of malpractice. Our study was not intended to look at those elements of the therapeutic relationship or their independence from the characteristics examined in our study.

For the purposes of our analysis, the number of licensed physicians is assumed to remain stable over the course of the period of analysis. However, based on annual reporting, over the decade, the number of licensed physicians increased by 4%.[21]

CONCLUSION

Our study confirms that the rate of malpractice settlements/awards in Rhode Island is 0.9% of licensed physicians per year. Compared to the general population of licensed physicians, we found certain populations of physicians with higher incidence of settlements/awards who are, therefore, at higher risk for medical malpractice claims. Surgeons and male physicians were found to be more likely to have settlements/awards against them. Prior studies have suggested that performing certain procedures may place surgeons at risk for malpractice, but that does not explain why males are at higher risk. Further study would be helpful to understand underlying behaviors or elements of the therapeutic relationship that may contribute to these risks.

References

1. Rhode Island Board of Medical Licensure and Discipline 2019 Annual Report. Accessed January 14, 2021. https://health.ri.gov/publications/annualreports/2019BoardOfMedicalLicensureAndDiscipline.pdf
2. *Licensure and Discipline of Physicians*. Rhode Island Department of State rules.sos.ri.gov/regulations/part/216-40-05-1.
3. 5-37-9. Reports relating to professional conduct and capacity – Regulations – Confidentiality – Immunity. Accessed January 15, 2021. http://webserver.rilin.state.ri.us/Statutes/TITLE5/5-37/5-37-9.HTM
4. Bal BS. An introduction to medical malpractice in the United States. In: *Clinical Orthopaedics and Related Research*. Vol 467. Springer New York; 2009:339-347. doi:10.1007/s11999-008-0636-2
5. Kane CK. *Policy Research Perspectives Medical Liability Claim Frequency: A 2007-2008 Snapshot of Physicians*; 2010.
6. Klimo GF, Daum WJ, Brinker MR, McGuire E, Elliott MN. Orthopedic medical malpractice: an attorney's perspective. *Am J Orthop* (Belle Mead NJ). 2000;29(2):93-97.
7. Bass GD, Zhao FS, Schweickert WD, Manaker S. A Retrospective Analysis of Malpractice-Related Procedure Rates for Internal Medicine Specialists at an Academic Medical Center. *The Joint Commission Journal on Quality and Patient Safety*. 2021;47:704-710. doi:10.1016/j.jcjq.2021.08.001
8. Medscape Malpractice Report 2021. Accessed February 23, 2022. https://www.medscape.com/slideshow/2021-malpractice-report-6014604#5
9. Burkle CM, Martin DP, Keegan MT. Which is feared more: harm to the ego or financial peril? A survey of anesthesiologists' attitudes about medical malpractice. *Minn Med*. 2012;95(9):46-50.
10. Balch CM, Oreskovich MR, Dyrbye LN, et al. Personal consequences of malpractice lawsuits on American surgeons. *J Am Coll Surg*. 2011;213(5):657-667. doi:10.1016/j.jamcollsurg.2011.08.005
11. Studdert DM, Mello MM, Sage WM, et al. Defensive medicine among high-risk specialist physicians in a volatile malpractice environment. *J Am Med Assoc*. 2005;293(21):2609-2617. doi:10.1001/jama.293.21.2609
12. Anhøj J, Wentzel-Larsen T. Sense and sensibility: on the diagnostic value of control chart rules for detection of shifts in time series data. *BMC Medical Research Methodology*. 2018;18(1). doi:10.1186/S12874-018-0564-0
13. Mello MM, Chandra A, Gawande AA, Studdert DM. National costs of the medical liability system. *Health Affairs*. 2010;29(9):1569-1577. doi:10.1377/hlthaff.2009.0807
14. Mohammed MA, Panesar JS, Laney DB, Wilson R. Statistical process control charts for attribute data involving very large sample sizes: A review of problems and solutions. *BMJ Quality and Safety*. 2013;22(4):362-368. doi:10.1136/bmjqs-2012-001373
15. Schaffer AC, Jena AB, Seabury SA, Singh H, Chalasani V, Kachalia A. Rates and characteristics of paid malpractice claims among US Physicians by Specialty, 1992-2014. *JAMA Internal Medicine*. 2017;177(5):710-718. doi:10.1001/jamainternmed.2017.0311
16. Barre L, Phengsavatdy A, Benson M, McDonald JV. Review of Rhode Island Physician Loss-of-Licensure Cases. *Rhode Island Medical Journal*. Published online 2020.
17. McDonald JV, Melo B. Framework for Just Culture: Rhode Island Board of Medical Licensure and Discipline. *Journal of Medical Regulation*. 2020;106(4):27-31. doi:10.30770/2572-1852-106.4.27
18. Jena AB, Seabury S, Lakdawalla D, Chandra A. Malpractice Risk According to Physician Specialty. *New England Journal of Medicine*. 2011;365(7):629-636. doi:10.1056/NEJMsa1012370
19. Carroll AE, Buddenbaum JL. High and low-risk specialties experience with the U.S. medical malpractice system. *BMC Health Services Research 2013 13:1*. 2013;13(1):1-7. doi:10.1186/1472-6963-13-465
20. Orosco RK, Talamini J, Chang DC, Talamini MA. Surgical malpractice in the United States, 1990-2006. *J Am Coll Surg*. 2012;215(4):480-488. doi:10.1016/j.jamcollsurg.2012.04.028
21. RI Board of Medical Licensure and Discipline–2019 Annual Report

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Disclosures

No conflicts of interest to report.

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