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Medical Liability Claim Frequency Among U.S. Physicians

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Introduction

Medical liability claims impose costs to society—monetary and non-monetary—so examining their prevalence is important. Using new data from the American Medical Association's (AMA) 2016 Physician Practice Benchmark Survey, this paper presents estimates of claim frequency for all physicians and explores whether the likelihood of claims varies by age, gender, specialty, practice type and ownership status.

The 2016 Benchmark Survey offers a unique opportunity to shed light on physicians' risk of liability. Other data sources provide measures of claim frequency, but they lack the total number of physicians which is needed to calculate the *relative* frequency (or risk) of getting sued. For example, while the PIAA—a trade association of medical liability insurance companies—has very good data on the number of closed claims, it does not report the number of physicians that are insured.[1] Schaffer et al. (2017) use data on the number of lawsuits from the National Practitioner Data Bank (NPDB). However, because the NPDB data do not report the number of physicians, they have to rely on the AMA Masterfile data to obtain it. In contrast, our data allows us to ask questions such as: out of a nationally representative sample of physicians, how many of *those* physicians have been sued?

As a preview, we find that liability claims against physicians is not a rare event. Thirty-four percent of physicians have had a claim filed against them at some point in their careers. We also find that claim frequency varies by certain factors, particularly age, specialty and gender. Older physicians had a higher incidence of claims than did younger ones. There was also wide variation in claim incidence by specialty. General surgeons and obstetricians/gynecologists (OB/GYN) were the physicians most likely to be sued.

Data and Methods

The 2016 Benchmark Survey is a nationally representative survey of post-residency physicians who provide at least 20 hours of patient care per week, are not employed by the federal government, and

[1] PIAA. *Closed Claims Comparative*, 2016

practice in one of the 50 U.S. states or the District of Columbia (Kane 2017). The data include 3500 physicians with a response rate of 36 percent.[2]

This paper relies on three questions in the 2016 Benchmark Survey aimed at collecting information on medical liability claim frequency: *i*) whether any claims have been filed against the physician during his/her career, *ii*) the number of claims filed against the physician during his/her career and *iii*) the number of claims filed in the twelve months prior to the survey.[3] This paper uses the terms "lawsuits" and "claims" interchangeably.

It should be noted that getting sued is not necessarily indicative of medical error. To shed light on this, consider that data from the PIAA show that 68 percent of claims that closed in 2015 were dropped, dismissed or withdrawn, and out of the 7 percent of claims that were decided by a trial verdict, 88 percent were won by the defendant.[4] Thus, this paper's focus is not on whether physicians make medical errors, but rather simply on whether they had liability claims filed against them.

The analysis begins with a presentation of population estimates of claim frequency. We report descriptive statistics measuring the extent of claims against all physicians as well as by age, gender, specialty, practice type and physician ownership status. This descriptive analysis also gives us a first glimpse at whether there is any variation in claim incidence by those different categories.

Although population estimates are very useful in their own right, we complement them with analyses that allow us to look at the correlation between a specific characteristic (e.g. gender) and claim incidence, while controlling for other important factors (e.g. specialty). While the descriptive analysis looks at the correlations between claim frequency and individual characteristics separately, this more systematic regression analysis looks at all of those correlations simultaneously.

Results

Descriptive Results – Population Estimates

In this section, we present population estimates of medical liability claim frequency for all physicians as well as by age, gender, specialty and practice arrangements. The results show similar patterns across age, gender and specialty as those found in Kane (2010), who used data from 2007-2008. However, due to significant differences in survey methodologies, we cannot compare changes in claim incidence over time.

Table 1 presents the results for all physicians and by age and gender. It shows the percentage of physicians who had any medical liability claims filed against them. It also reports the fraction of

[2] The survey includes weights to account for the probability of selection into the sample, to adjust for non-resolution of eligibility status, non-response, and differences between respondents and the population. All population estimates presented here are weighted. For a more detailed description of the survey methodology, see Kane (2017).

[3] About 8 percent of the final 3500 sample resulted in missing observations—"don't know" or "prefer not to answer" responses to the liability questions, resulting in Ns ranging from 3145 to 3211.

[4] PIAA. *Closed Claims Comparative*, 2016 and author's calculations of data from that report.

physicians who have been sued two or more times, the share who have been sued during the twelve months prior to the survey, and the average number of liability claims filed per 100 physicians.[5]

The results show that getting sued is not an uncommon event for physicians. Thirty-four percent of all physicians have been sued, and 16.8 percent have been sued two or more times. On average 68 liability claims were filed per every 100 physicians. Because of the narrower time frame, the fraction of physicians who have been sued recently is much lower. Column 3 shows that only 2.3 percent of physicians were sued in the last year.

The probability of getting sued increases with age. This is not surprising given that older physicians have had more exposure to risk of lawsuits because they have been practicing for longer periods of time. Whereas 8.2 percent of physicians under the age of 40 have been sued, almost half of physicians over the age of 54 have been. The probability of being sued two or more times and the average number of claims filed against physicians increase with age as well. Although fewer than 2 percent of physicians under 40 have been sued at least twice, this fraction rises to 28.0 percent for physicians ages 55 and over. The final column shows that while 10 claims per 100 physicians had been filed against physicians under 40, this number increases to 109 claims for those over 54. Finally, there is less variation by age in the probability of having been sued recently. Fewer than 3 percent of physicians were sued in the last year regardless of their age.

There is also variation in claim frequency by gender. Female physicians were less likely to be sued than their male counterparts. Almost 40 percent of male physicians have been sued over the course of their careers, compared to 22.8 percent of women. While 20.4 percent of male physicians had at least two claims filed against them, 9.7 percent of female physicians did. On average, women had about half the number of claims filed against them (41 per 100) than did male physicians (82 per 100). As with age, however, there was little variation by gender in the likelihood of getting sued recently. The percentage of both men and women who were sued in the last year was just above 2 percent.

There are a number of apparent reasons why women are less likely to get sued than male physicians, such as differences in age and specialty.[6] In separate analyses, we find that women physicians tend to be younger than their male counterparts so they have been in practice for a shorter period of time and thus have had less exposure to liability risk.[7] Thus, lower age is one explanation for part of the gender differential in claim frequency. We also find that with one exception (OB/GYN), women tend to practice in lower risk specialties than their male counterparts. In short, just controlling for age and specialty largely reduces the gender differential in claim incidence.

Table 2 also shows wide variation in claim frequency by specialty. Psychiatrists and pediatricians were the least likely among the specialties to be sued. Sixteen percent of psychiatrists and 17.8 percent of pediatricians have been sued, and about 6 percent of physicians in those specialties have been sued two or more times. At the other end of the distribution, general surgeons and OB/GYNs

[5] This last statistic is simply the average number of claims per physician multiplied by 100.
[6] See the AMA's *Physician Characteristics and Distribution in the US, 2015 Edition*, which reports physician distribution by gender, age and specialty.
[7] Results not shown.

were the most likely to be sued. Over 63 percent of general surgeons and OB/GYNs had a claim filed against them. Half of general surgeons and 44.1 percent of OB/GYNs were sued two or more times. Among OB/GYNs, there was an average of 162 claims filed per every 100 physicians, and the number among general surgeons surpasses 200. Although in general there was low incidence and little variation by specialty in getting sued recently, general surgeons and OB/GYNs also stood out, with 8.0 percent and 6.7 percent, respectively, getting sued in the last year.

Table 3 reports percentages of physicians who have been sued by both age and specialty. This analysis also reveals wide variation in claim frequency. One notable finding is that before they turn 55, over half of general surgeons and OB/GYNs have already been sued. Also noteworthy is that of those over 54, over three quarters of physicians in those specialties had at least one claim filed against them. Even older family practitioners had a high claim incidence, with more than half of those over 54 getting sued at some point in their careers.

In contrast to the findings by age, gender and specialty, there is much less variation in claim frequency by type of practice and physician ownership status (Table 4). In general, these results suggest that solo practitioners have a somewhat higher claim frequency than physicians in other practice types. About 30 percent of physicians employed in hospitals and those who are in multi-specialty groups have been sued, compared to 40.4 percent of solo practitioners. Solo practitioners also had a higher average number of claims filed against them (89 per 100) than physicians in other practice types.

Employed physicians had a somewhat lower claim frequency than owners and independent contractors. Thirty-seven percent of both owners and independent contractors had a claim filed against them. In contrast, the share among employees was 30.1 percent.

Regression Analysis of Medical Liability Claim Frequency

The analysis in the previous section showed that having liability claims filed against physicians is not rare. It also revealed that the chance of getting sued varies by age, gender and specialty, and to a much lesser extent, by practice type and ownership status. However, those descriptive analyses do not allow one to control for correlations among the specific characteristics themselves. For example, while they show that men are more likely to be sued than women, we also know that male physicians tend to practice in higher risk specialties. Therefore, in this section we complement those analyses with an analysis that looks at the correlation between a specific characteristic (e.g. gender), while controlling for other important factors. To illustrate, the following more systematic regression analysis allows us to assess whether women are still less likely to be sued than men after controlling for their age, specialty and practice arrangements.

Regression results of the probability of being sued, being sued two or more times and the average number of claims per 100 physicians are presented in columns 1 through 3 of Table 5, respectively. The first results we discuss are the estimates by age. For ease of presentation, we compare the claim frequency of older (age 40-54 and 55+) to younger physicians (under 40). These results corroborate the results from the descriptive analysis above. Age is still strongly positively correlated with claim frequency, and the sizes of the differences do not change much when controlling for other factors. Again this is not surprising given that older physicians have had more exposure to liability

risk. Compared to physicians under 40, those 40-54 were 19.5 percentage points and those 55 and over were 39.4 percentage points more likely to have been sued. The probabilities of being sued two or more times and the average number of claims are also higher for older physicians.

Consistent with the results from the descriptive analysis, women were still less likely to have claims filed against them than their male counterparts. Interestingly, however, the size of those differences shrinks substantially, suggesting that other factors—in particular age and specialty—are responsible for a significant part of the gender differentials reported in Table 1. Controlling for age and specialty reduces the gender differential in getting sued by about 6 percentage points, or roughly 40 percent.[8] Table 5 shows that women were 8.7 percentage points less likely to have been sued and had about 23 fewer claims per 100 physicians than male physicians.

We still find wide variation in claim frequency by specialty after controlling for other factors. We compare claim incidence in different specialties to internists. General surgeons, OB/GYNs, emergency medicine physicians, surgical subspecialists and, to a lesser extent, radiologists had a higher incidence of claims than internists. In contrast, pediatricians and psychiatrists have lower claim frequency. General surgeons and OB/GYNs have the highest incidence of claims. For example, OB/GYNs were 34 percentage points more likely to have been sued and 32.5 percentage points more likely to have been sued two or more times than internists.

Turning to the results by type of practice, in contrast to the findings from the simple analysis above which suggested a somewhat higher claim frequency among solo practitioners, here we find no evidence of variation. Compared to single-specialty physicians, those in other practice types (including solo practitioners) are no more or less likely to have been sued. Solo practitioners may have had more claims filed against them than those in single-specialty groups, but the estimate is not statistically significant. This suggests that the differences reported in Table 4 were due to other factors for which we are now controlling.

Finally, we turn to the results by physician ownership status. The interesting finding here is that, in contrast to the results from the simple analysis in Table 4 which show that employed physicians had a somewhat lower incidence of claims than owners, here we find some opposing evidence. First, employed physicians were no more or less likely than owners to have been sued. Second, employees were actually a bit *more* likely (3 percentage points) than owners to have had two or more claims filed against them, and they had 12 more claims per 100 physicians than did owners. It is not clear why employees would have more claims than owners. A separate analysis shows that these findings are driven by employed physicians in single specialty groups—in particular, a few physicians with a relatively large number of claims.[9]

[8] This is from a comparison of *unweighted* unadjusted and adjusted (regression) estimates. Note that the unadjusted estimates in Table 1 are weighted, whereas the regression estimates (Table 5) are not so they are not directly comparable. Not weighting the unadjusted estimates reduces the 16.59 percentage point gender difference in Table 1 by about 1.67 percentage points, to 14.92, which is what we compare to the 8.7 percentage point difference estimated by the regression.

[9] Results not shown.

Conclusion

Using data from the 2016 Benchmark Survey, this paper presents population estimates of medical liability claim frequency for all physicians as well as by age, gender, specialty, practice type and physician ownership status. Those data are complemented by a regression analysis that examines the correlation between a given characteristic (e.g. gender) and liability risk, while controlling for other important factors. We note that getting sued is not necessarily indicative of medical error.

We find that over a third of all physicians have been sued at some point in their careers. Due to the narrower time frame, there was a low (2.3 percent) chance of getting sued in the last year.

Older physicians had a much higher incidence of claims than younger physicians. Controlling for other factors, physicians 55 and older were about 40 percentage points more likely to have been sued than physicians under 40.

Women had lower claim frequency than male physicians. Controlling for other factors shrinks the differentials substantially, though women were still 8.7 percentage points less likely to have been sued than their male counterparts.

General surgeons, OB/GYNs and, to a lesser extent, emergency medicine physicians and surgical subspecialists had a relatively high incidence of claims. General surgeons and OB/GYNs had an over 30 percentage point higher probability of being sued and getting sued two or more times than did internists. Psychiatry and pediatrics were the relatively lower risk specialties.

It is not rare for physicians to have liability claims filed against them. Physicians' liability risk is significant. We also find variation in claim frequency by certain characteristics. Gender, and especially age and specialty are strong predictors of claim incidence. There are plausible reasons why we would expect at least some of these findings. Women physicians are relatively younger and tend to work in lower risk specialties; older workers have had more exposure to liability claims; and some specialties are inherently more risky than others. More research is needed to better understand the extent of these correlations and why they arise.

References

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Table 1. Medical Liability Claim Frequency by Physician Age and Gender, 2016

	Percentage of Physicians			Number of Claims per 100 Physicians
	Ever Sued	Sued 2+ Times	Sued in Last 12 Months	
	(1)	(2)	(3)	(4)
All Physicians	34.0%	16.8%	2.3%	68
Under age 40	8.2%	1.8%	1.2%	10
Age 40-54	28.7%	11.6%	2.6%	50
Age 55 and over	49.2%	28.0%	2.6%	109
Men	39.4%	20.4%	2.5%	82
Women	22.8%	9.7%	2.1%	41
Observations	3211	3145	3147	3145

Source: Author's tabulation of data from the AMA's 2016 Benchmark Survey.

Table 2. Medical Liability Claim Frequency by Physician Specialty, 2016

Specialty	Percentage of Physicians			Number of Claims per 100 Physicians
	Ever Sued	Sued 2+ Times	Sued in Last 12 Months	
	(1)	(2)	(3)	(4)
Anesthesiology	36.3%	17.9%	1.3%	64
Emergency medicine	51.7%	25.7%	3.0%	108
Family practice	33.4%	13.8%	1.1%	55
General surgery	63.2%	50.1%	8.0%	205
Internal medicine	31.7%	14.8%	3.1%	57
Internal medicine sub-specialties	25.5%	11.0%	1.0%	44
Obstetrics/Gynecology	63.6%	44.1%	6.7%	162
Pediatrics	17.8%	6.0%	1.0%	28
Psychiatry	16.1%	5.9%	1.9%	25
Radiology	37.6%	21.4%	0.4%	82
Surgical sub-specialties	47.4%	25.0%	3.3%	110
Other specialties	19.5%	5.8%	2.5%	29
Observations	3211	3145	3147	3145

Source: Author’s tabulation of data from the AMA’s 2016 Benchmark Survey.

Table 3. Percentage of Physicians Ever Sued by Age and Specialty, 2016

Specialty	Under Age 55	Age 55+
Anesthesiology	24.5%	51.4%
Emergency medicine	41.3%	72.2%
Family practice	18.1%	51.4%
General surgery	54.8%	75.5%
Internal medicine	18.5%	45.6%
Internal medicine sub-specialties	14.7%	43.1%
Obstetrics/Gynecology	53.7%	76.5%
Pediatrics	10.9%	27.9%
Psychiatry	8.7%	23.0%
Radiology	23.2%	53.5%
Surgical sub-specialties	31.0%	67.4%
Other specialties	12.4%	33.2%
Observations	1977	1234

Source: Author's tabulation of data from the AMA's 2016 Benchmark Survey.

Table 4. Medical Liability Claim Frequency by Type of Practice and Physician Ownership Status, 2016

	Percentage of Physicians		Number of Claims per 100 Physicians
	Ever Sued	Sued 2+ Times	
	(1)	(2)	(3)
Practice type			
Solo practice	40.4%	21.2%	89
Single specialty group	34.9%	17.5%	68
Multi-specialty group	29.5%	14.1%	59
Direct hospital employee	29.3%	15.2%	62
Other[1]	33.5%	14.7%	62
Physician ownership status			
Owner	37.4%	18.6%	75
Employee	30.1%	15.2%	62
Independent contractor	37.4%	16.5%	68
Observations	3211	3145	3145

Source: Author's tabulation of data from the AMA's 2016 Benchmark Survey.
Note: [1] The "other" category includes ambulatory surgical center, urgent care facility, HMO/MCO, medical school, faculty practice plan, and fill-in responses.

Table 5. Some Correlates of Medical Liability Claim Frequency

Independent Variable	Ever Sued	Sued 2+ Times	Number of Claims per 100 Physicians
	(1)	(2)	(3)
Age 40-54	0.195***	0.095***	38.70***
	(0.021)	(0.017)	(5.83)
Age 55 and over	0.394***	0.253***	96.36***
	(0.022)	(0.017)	(6.15)
Female	-0.087***	-0.062***	-22.84***
	(0.017)	(0.013)	(4.75)
Anesthesiology	0.040	0.023	8.49
	(0.037)	(0.029)	(10.28)
Emergency medicine	0.224***	0.110***	54.50***
	(0.043)	(0.034)	(11.87)
Family practice	0.023	-0.002	0.194
	(0.031)	(0.024)	(8.44)
General surgery	0.305***	0.362***	148.0***
	(0.049)	(0.039)	(13.83)
Internal medicine sub-specialties	-0.024	-0.013	-3.38
	(0.030)	(0.024)	(8.28)
Obstetrics/Gynecology	0.341***	0.325***	116.0***
	(0.040)	(0.032)	(11.36)
Pediatrics	-0.099***	-0.059**	-18.34**
	(0.033)	(0.025)	(8.96)
Psychiatry	-0.166***	-0.088***	-34.37***
	(0.039)	(0.030)	(10.66)
Radiology	0.067	0.069*	28.29**
	(0.046)	(0.037)	(12.90)
Surgical sub-specialties	0.150***	0.105***	52.29***
	(0.032)	(0.026)	(9.02)
Other specialties	-0.050	-0.051*	-12.66
	(0.034)	(0.027)	(9.46)
Solo practice	0.008	0.009	10.07
	(0.023)	(0.018)	(6.40)
Multi-specialty group	-0.021	-0.020	-4.07
	(0.020)	(0.016)	(5.50)
Other practice type	0.004	-0.027	-7.05
	(0.030)	(0.023)	(8.22)
Direct hospital employee	-0.025	-0.011	-3.69
	(0.032)	(0.025)	(8.86)
Employee	0.014	0.029*	12.29**
	(0.019)	(0.015)	(5.17)
Independent contractor	0.033	0.020	8.21
	(0.035)	(0.028)	(9.85)
Observations	3211	3145	3145

Notes: Estimates from a regression of the dependent variable in columns 1-3 on the independent variables in the leftmost column. Omitted categories are physicians under the age of 40, in internal medicine, in single-specialty groups, and owners. ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$.