



Fear of Malpractice and Defensive Medicine in the Emergency Department

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The Emergency Department

- Emergency departments in US are stretched near capacity
- ACEP Data – decreasing number of EDs
 - 1997 the total number of EDs was 4,945
 - 2004 the total was 4,017 – **decrease of 19%**
- ED visits
 - 90.3 million ED visits in 1993
 - 113.9 million in 2003
 - 136 million in 2009 – **increase of 50.6% in 16 years!!**

2006 IDOM Report; ACEP website; CDC report

The Emergency Department



The Emergency Department

- Challenging environment
- Incomplete information
- Continual flow of patients
- Pressure to see more patients efficiently
- Many interruptions
- Critical cares / traumas
- Safety net for US health care

Malpractice Risk in the ED



<http://www.funnygreetings.net/html/Medical-Malpractice.html>

ED-Based Malpractice Claims

- 11,529 closed claims reviewed from ED 1985-2007
- Insurer group – 60% physicians
- **19% of claims – Emergency Medicine physician as primary defendant**
- Most common claims
 - Error in diagnosis – 37% (4,233)
 - No error identified – 18% (2,091)
 - Improperly performed procedure – 17% (1,935)

Brown et al. 2010

Causes of ED Claims

Table 2
Top 10 Categories of Error Attributed to ED Claims, by Total Number of Closed Claims, With Associated Indemnity

Error	Closed Claims	% of Total	Paid Claims	% Paid	Total Indemnity	Average Indemnity
Error in diagnosis	4,233	37	1,642	39	\$347,200,036	\$211,449
No error identified by insurer	2,091	18	84	4	\$14,415,118	\$171,609
Improper performance	1,935	17	571	30	\$78,283,607	\$137,099
Failure to supervise or monitor a case	755	7	321	43	\$87,987,917	\$211,800
Failure to perform	405	4	172	42	\$24,255,313	\$141,109
Delay in performance	301	3	114	38	\$28,320,109	\$248,422
Medication errors	275	2	97	35	\$10,805,493	\$111,397
Failure or delay in referral or consultation	273	2	110	40	\$20,589,683	\$187,179
Failure or delay in admission to hospital	269	2	114	42	\$25,542,958	\$224,061
Failure to recognize treatment complication	255	2	80	31	\$13,685,671	\$171,071
Other	737	6	217	29	\$33,066,215	\$152,379
Total	11,529		3,522	31	\$684,152,120	\$188,572

ED Malpractice Claims

- Most common pathology
 - 6% – fracture (vertebra, ulnar/radius, tib/fib)
 - 5% – AMI
 - 2% – appendicitis
- Outcome
 - 64% of cases dropped or dismissed
 - 29% closed with settlement
 - 6% verdict for defendant
 - 1% verdict for plaintiff

Brown et al. 2010

Claim Resolution Numbers

Table 5
Resolution of Claims by Adjudicatory Outcome, With Associated Indemnity and Expense

Outcome	Closed Claims	% of Total	Total Indemnity	Average Indemnity	Total Expense	Average Expense
Verdict for plaintiff	119	1	\$46,808,680	\$393,350	\$9,100,559	\$76,475
Verdict for defendant	667	6			\$42,420,504	\$63,599
Settlement (with payment to plaintiff)	3,216	29	\$564,553,150	\$175,545	\$82,486,149	\$25,643
Withdrawn, dropped, or dismissed without payment to plaintiff	7,220	64			\$85,045,120	\$11,779
Total*	11,222		\$611,361,830	\$183,317	\$219,034,332	\$19,518

*Specific adjudication information not available for 307 claims resolved through alternative means, such as arbitration or mediation.

Summary

- Most claims dropped or dismissed
- Most frequent claim – missed diagnosis
- Acute myocardial infarction – highest paid ratio – 42%
 - Average indemnity \$317,281 for chest pain – higher than most
 - Error in diagnosis in majority of claims for AMI

Brown et al. 2010

Risk by Specialty



Malpractice Risk by Specialty

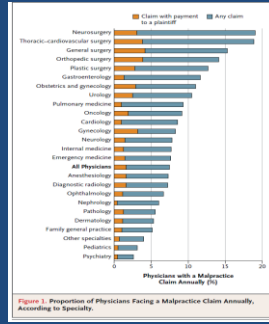
- 40,916 physicians covered by a large nationwide insurer
- Between 1991-2005 – 25 covered specialties
- Reviewed claims made and payment by specialty
- 7.4% of all specialties sued per year; 1.6% paid
- 78% of claims did not result in payment
- Consistent with Brown et al. – 70%

Jena et al. 2011

Annual Risk of Suit by Specialty

- Neurosurgery – 19.1%
- Cardiothoracic Surgery – 18.9%
- General Surgery – 15.3%
- Family Medicine – 5.2%
- Pediatrics – 3.1%
- Psychiatry – 2.6%
- **Emergency Medicine – around 7.5%**

Malpractice Risk by Specialty



Malpractice Risk by Specialty

- 5 lowest-risk specialties – 75% expected to be sued by age 65; 19% to make indemnity payment
- For highest-risk specialties – 99% expect lawsuits by age 65; 71% will make payment

Defensive Medicine



Defensive Medicine Among High-Risk Specialist Physicians in a Volatile Malpractice Environment

- May 2003 survey – 824 PA physicians in high-risk fields:
 - Orthopedic Surgery
 - General Surgery
 - OB/GYN
 - Emergency Medicine
 - Radiology
- 93% of surveyed physicians sometimes or often engage in defensive medicine tactics

JAMA, June 1, 2009—Vol. 303, No. 21

Defensive Medicine

Table 2. Frequency of Assurance and Avoidance Behaviors by Physician Specialties*

	All Specialists, No. (%) (n = 66)		Emergency (n = 148)		General Surgeons (n = 152)		Orthopedic Surgeons (n = 127)		Neurosurgeons (n = 52)		Obstetricians/Gynecologists (n = 187)	
	Never	Often	Never	Often	Never	Often	Never	Often	Never	Often	Never	Often
Assurance behavior												
Order more tests than medically indicated	405 (59)	52 (8)	702	4	55	9	62	7	50	22	54	8
Prescribe more medications (eg, antibiotics) than medically indicated	223 (33)	207 (31)	30	29	35	30	432	30	195	55	28	32
Refer patients to other specialists in unnecessary circumstances	349 (52)	78 (11)	52	11	50	13	46	13	202	32	59	7
Suggest invasive procedures (eg, biopsies) to confirm diagnosis	221 (32)	190 (28)	192	32	441	22	28	35	21	61	38	25
Avoidance behavior												
Avoid certain procedures or interventions	216 (32)	189 (28)	211	43	25	28	42	19	30	33	38	25
Avoid caring for high-risk patients†	388 (58)	236 (35)	132	54	43	35	572	22	38	43	46	28

*The data are weighted. Adjusted Pearson χ^2 tests were used to test for significant differences between the proportion within each specialty who reported conducting the behavior often and the corresponding proportion for all other specialties combined.
†Risk factors were excluded because of the high proportion of responses indicating that the defensive practice was not applicable (eg, 54% regarding practice of overprescribing, 37% regarding referral to other specialties).
‡ $P < .05$ compared with frequency of "often" responses for the other specialties combined.
§ $P < .01$ compared with frequency of "often" responses for the other specialties combined.
¶The survey question asked whether respondents believed that practice or hospital would avoid caring for high-risk patients in the next 2 years. Responses (often/never) were "often" with those associated by "often" effect. The "often" column reports the "often" response; the "never" column reports "often" effect and "not" effect responses combined.

Defensive Medicine

- 92% of survey used Assurance Tactics
- 70% EM vs. 59% group “often order” more tests than indicated (P < .05)
- EM least likely to avoid high-risk patients – 13% vs. 32%
- Self identified areas of defensive medicine:
 - w/u for atypical chest pain
 - CT abd for unlikely appendicitis
 - CT head for minor trauma

Does Fear of Malpractice Correlate with Defensive Tactics?

- 33 EM physicians – January 2000 to May 2001
- 1,134 patients with possible ACS
- 6-question survey
- Low (<15), mod (15-20), high (>20) litigation fear by answers
- Separate risk-taking survey – no significant correlation

Katz et al. 2005

Survey Questions

Appendix 2. Fear of malpractice scale.
Please complete the remaining section from the perspective of an emergency physician treating a full range of patients, not just patients with coronary artery disease. Indicate the extent to which you agree or disagree with the following statements.

Item	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. I have had to make significant changes in my practice pattern because of recent legal developments concerning medical delivery.	1	2	3	4	5
2. I am concerned that I will be involved in a malpractice case sometime in the next 10 years.	1	2	3	4	5
3. I feel pressured in my day-to-day practice by the threat of malpractice litigation.	1	2	3	4	5
4. I order some tests or consultations simply to avoid the appearance of malpractice.	1	2	3	4	5
5. Sometimes I ask for consultant opinions primarily to reduce my risk of being sued.	1	2	3	4	5
6. Relying on clinical judgment rather than on technology to make a diagnosis is becoming riskier from a medicolegal perspective.	1	2	3	4	5

Results – Low Fear versus High

- 51% discharged vs 42.2% discharge OR .56 (CI, .4 to .9)
- Low-risk patient discharge – 80% vs 64% high fear group – OR .34 (CI, .12 to .99)
- Test troponin 74.3% vs 80.4% high fear group – OR 1.9 (CI, 1.2 to 2.9)
- Admission to tele – 51% vs 42%; OR 1.7 (CI, 1.2 to 2.4)

Summary

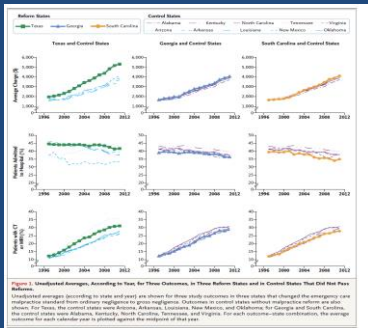
- Fear of litigation appeared to correlate with increased testing and number of admissions for ACS
- Limitation:
 - Small study only involving one institution
 - Potential benefit to increased testing not evaluated
 - Malpractice history of providers not evaluated

Waxman et al – NEJM October 2014

- Study 1997-2011 – 5% of Medicare patients randomly surveyed in acute care visits
- GA, TX and SC before and after enactment of gross negligence standard in the ED
- Compare – per visit expenditures, MRI/CT ordering and admissions
- Controlled with surrounding states – regression analysis



Comparison of GA, TX & SC – Before and After Malpractice Standard Reform



Effects on Testing, Admissions & Total Charges in the ED

Table 3. Estimated Effects of Malpractice Reform on Three Outcomes in Three States.^a

Outcome	Texas	Georgia	South Carolina
Total charge			
Policy-attributable effect — % (95% CI) [†]	1.2 (-1.4 to 3.8)	-3.6 (-6.2 to -0.9)	1.2 (-2.2 to 4.6)
P value	0.38	0.01	0.50
CT or MRI			
Odds ratio (95% CI)	1.0 (0.9 to 1.1)	1.0 (0.9 to 1.1)	1.0 (0.9 to 1.1)
Policy-attributable effect — percentage points (95% CI) [‡]	0.2 (-1.2 to 1.4)	0.6 (-1.3 to 4.5)	0.0 (-0.9 to 1.0)
P value	0.81	0.76	0.97
Hospital admission			
Odds ratio (95% CI)	1.0 (0.9 to 1.0)	1.0 (0.9 to 1.0)	0.9 (0.9 to 1.0)
Policy-attributable effect — percentage points (95% CI) [‡]	0.0 (-0.9 to 0.9)	-0.2 (-1.2 to 0.9)	-0.2 (-1.0 to 1.4)
P value	0.99	0.75	0.35

^a Nine regressions are represented. For total charges, the transformed coefficient for a regression on log-transformed charges can be interpreted as the policy-attributable average percent change in charges (e.g., in Georgia, malpractice reform was associated with a 3.6% reduction in charges; P=0.01). For the dichotomous outcomes, both the odds ratios and the average marginal effects (absolute percent differences) are shown. The P values were calculated for the average marginal effect with the use of the delta method. CI denotes confidence interval.
[†] The policy-attributable effect was calculated as follows: 100 × (exp[coefficient]-1) for the regression of log(charges).
[‡] The policy-attributable effect is the average marginal probability (i.e., recycled prediction) for the interaction between the visit date (i.e., before or after the state-specific reform date) and the location of the hospital (i.e., in a reform or control state).

Results

- Compared to control states, malpractice reform was not associated with decreased CT or MRI utilization
- Admission rates were not affected
- In Georgia, reform was associated with **3.6%** reduction in per visit charges (95% CI (.9 to 6.2); P= 0.01)
- TX and SC had no reduction in per visit charges

Does This Mean That Defensive Medicine Doesn't Really Exist?

form states do not believe that they are fully protected. This is true to some degree, but the critique may be applied to any other law. For example, some have advocated for “safe harbor” laws, which would provide specific protections to physicians who adhere to evidence-based guidelines. If physicians do not believe that they are adequately protected by a legal standard of gross negligence, then they also might not believe that they are protected by a statute that provides a safe harbor for evidence-based guidelines. Indeed, a recent study showed that evidence-based guidelines would be applicable to only a minority of malpractice claims.²⁹

What?...That's the Argument?



Why Waxman Fails to Disprove Defensive Medicine

- ED physician surveys report engaging in defensive medicine
- Fear of malpractice may be linked to defensive practice
- Waxman does not show that legal protections diminished fear in GA, SC or TX or that providers are aware of the protections
- All that is shown is that malpractice reforms failed to decrease testing, admissions and costs in GA, SC and TX
- We do not know why (ignorance, persistent fear, habit?)

Summary

- ED is a challenging environment
- Risk of malpractice suit is high, but success rates are low
- Fear of malpractice may increase defensive practice
- Waxman does not appear to disprove defensive medicine
- Further research is needed

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Example of Legal Ignorance

- If a lawyer can show that I breached the standard of care, I can be sued regardless of patient outcome
- True 23/38 – 60.5%
- False 15/38 – 39.5%