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MEDICAL MALPRACTICE: MANAGING THE RISK

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Abstract: Study Objective: This is an attempt to present an analysis of the literature examining objective information concerning the likelihood of medicolegal errors as it applies to current medical practice. Hopefully this information will be synthesized to generate a cogent approach to manage risk in emergency medicine.

Methods: Articles were obtained by an English language search of MEDLINE from January 1976 to July 2003. This computerized search was supplemented with literature from the author's personal medicolegal collection of peer review articles. This information was presented in a qualitative fashion.

Results: There was a steady increase in both the incidence and the recovery amount of verdicts involving general malpractice litigation. There are clearly high-risk emergency medicine categories responsible for most malpractice events, involving such commonly encountered conditions such as chest pain, abdominal pain, pediatric fever, central nervous system (CNS) bleeding, and abdominal aortic aneurysm (AAA). Interestingly, there is a second peak of more minor emergencies, specifically wounds with neglected foreign bodies and missed fractures. Clearly, the largest dollar amount recovery still involves chest pain with subsequent missed transmural myocardial infarction (MI).

Interestingly, there does not appear to be a strong correlation between adverse events, outcome and medicolegal risk. Likewise, there does not appear to be a strong correlation between socioeconomic status and a propensity to sue, but there were some defined links with physician profiles involving past malpractice history, as well as prior adverse relationships or communication skills to subsequent claims. Interestingly, a significant association appears to be advertising placed by local law offices seeking

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to provide services. Lastly in the emergency medical services (EMS) realm, the single strongest correlate to malpractice was the likelihood of an ambulance accident and not related to care delivered itself.

Conclusion: The current emergency medicine medicolegal dilemmas are a complex interaction of both patient and physician factors specifically targeting several disease categories and damage claims. Awareness of these issues can help to minimize subsequent medicolegal risk and improve patient care.

Keywords: Medical malpractice; risk management; legal theory; epidemiology of error.

HISTORY:

The concept of malpractice is rooted in the 18th century legal theory and is attributed to Sir William Blackstone.[1] In 1768 he described "mala praxis" where injuries . . . by the neglect or unskillful acts of (a person's) physician, surgeon or apothecary, . . . because it breaks the trust which the patient has placed in his physician and leads to the patient's destruction.[2] Although we would like to think that this is only a contemporary problem, clearly the basic framework for medical malpractice has existed for many years.

OVERVIEW:

The negligence standard includes four basic tenets: first—duty, implying the existence of a valid patient-physician relationship; second—breach, or a violation of the standard of care; third—causation, when the care was "a" factor in outcome; and fourth—damages, which were related to the alleged breach. The most attenuated relationship in an adverse outcome scenario are causation between the perceived event and outcome, and damages where an adverse event occurs without true disability. These issues are often difficult to define with legal proof consuming most of the litigation time.

The legal process can be better understood by examining the procedural steps

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1. Mohr JC. American medical malpractice litigation in historical perspective. *JAMA.* 2000;283:1731-37.

2. Blackstone W. *Commentaries on the Laws of England.* Vol 3. Oxford, England: Clarendon Press; 1768:122.

involved.[3] The first step is "the filing" of a judicial complaint, or pleading, stating a factual allegation of negligence, accompanied by a request for damages by the plaintiff.

Secondly, the discovery process begins with a request for documents, such as medical records; followed by serving of interrogatories or questions relating to the event in question. There may be an overt request for admission by the respondent to dispense with uncontested items at trial. The formal legal process then progresses through depositions, or an interview taken under a legal oath recorded in written or video format. The deposition process includes questioning of both factual and expert witnesses.

Lastly, the process progresses to trial and the formal court proceedings. Here, information is presented and analyzed by opposing counsel; while the judge assists with deciding legal issues and the jury decides factual issues before the court. Clearly, the overall process is undesirable to all involved as it can take years to resolve, is very expensive, is accompanied by a loss of a great deal of personal privacy and is often brought to an unsatisfying conclusion for both plaintiff and defendant.

RISK MANAGEMENT:

This trendy term has brought the harsher aspects of business to the practice of medicine. Rather than emphasizing the procedural aspects of the litigation process, it is certainly more advisable to focus on prevention.

The goals of risk management therefore are prevention, analysis, decision making, settlement, mitigation, and process improvement. First, prevention of the potential for medical error is paramount in the medical process. This can be best achieved by providing education for medical trainees, continuing education for practicing physicians and proactive error avoidance strategies.

Second, a comprehensive evidence-based analysis of potential deviations of the standards of care needs to be completed. This analysis should utilize conventional literature standards offered by mainstream textbooks in the discipline. Avoid reactionary rapidly changing smaller research studies that may be misleading before a consensus is reached amongst the medical expert community.

3. Showers JL. What you need to know about negligence lawsuits. Nursing. 2000;2:45-48.

Third, the decision making regarding potential deviations in care standards is interfaced with causation likelihood. Unfortunately, bad things can happen to patients due to disease course and progression rather than the alleged deviation in care.

Fourth, settlement is sometimes advisable on the setting of medical liability on both moral and legal grounds. Doing the "right thing" for the patient so to speak. However, more often than not the issue is not one of negligence, but of venue. Here, the unsavory aspects of litigation like jury pool analysts, public sentiment and prior litigation experience in the venue may compel a prudent economic course rather than one based on the right-wrong distinction.

Fifth, mitigation is often accomplished by analysis of the circumstances at hand. It is desirable to simplify the case and focus risk on individuals specifically involved. Try to achieve dismissals or settlement for tangentially involved participants. Avoid finger-pointing at all costs.

Lastly, perhaps most importantly, use the lessons of the case to improve processes to avoid future similar incidents. Likewise, build versatility into the process to allow health care providers to extrapolate these results to new and different patient care encounters as well.

LEGAL THEORY:

The basic theories that form the foundation for a medical malpractice action include: lack of due care; lack of informed consent or battery; vicarious liability or respondeat superior; third party injury and abandonment.[4]

The lack of due care negligence standard is the most commonly utilized plaintiff theory suggesting a deviation from the proverbial "standard of care," albeit an ephemeral concept. The lack of informed consent standard is difficult to prove successfully in a appropriate patient care scenario, even though adverse intent is not required. The vicarious liability standard is commonly applied with the physician taking responsibility in a "captain of the ship" relationship with other independently licensed health care professionals (ie. physician extender) or a group or hospital being held accountable for the acts or omissions of the physician. Third party injury is often claimed by aggrieved family members of the injured patient with varying levels of success dependent on disability, especially if

4. Gittler GJ, Coldstein EJ. The elements of medical malpractice: an overview. *Clinical Infectious Diseases*. 1996;23:1152-5.

requiring continuing medical care. Lastly, abandonment is invoked if there is failure of the telephone triage, against medical advice (AMA) discharge, transfer or referral systems.

Defining the physician-patient relationship may help to elucidate legal theory as there is a transition from tort, or physician based contract, or patient based decision making.[5] Therefore, we must evaluate the decision making model that was utilized ranging from the traditional physician based decision model; informed consent with physician discussion accompanied by patient consent; a joint collaborative model and the patient choice model where the patient decides with physician counsel. Interestingly, the physician's medicolegal responsibility may be somewhat lessened by transferring "informed" decision making to the patient and families having them take responsibility under contract theory.

Another model describes the interaction of six factors separated into medical issues such as innovative system pressure, the use of uniform standards and liability insurance for providers; while legal issues include a contingency fee compensation system, citizen jurors and the tort pleading system, that result in an increase in the number of legal cases as being responsible for the litigation boom.[1] The "governor" of the system appears to be the estimate of possible financial recovery with a floor requirement to make the case economically feasible to proceed further.

SURVEY: MALPRACTICE EXPERIENCE

A survey of outcomes most likely to result in a successful plaintiff verdict in 1998 found that the most significant median malpractice award was associated with brain injury ($4,089,914), paralysis ($3,000,000), and missed cancer ($766,500).[6] The most commonly encountered diagnostic category in this sample was "death" in 22%, followed by brain damage at 9%, genital injury at 7%, and interestingly emotional distress at 5% associated with an average of $130,000 recovery.

The jury award to settlement ratio is approximately one half with a median jury award of $765,530 compared to settlement amount of $497,412. Lastly, the

5. Green JA. Minimizing malpractice risks by role clarification. *Annals of Internal Medicine*. 1988;109:234-41.

6. Practice Beat. 1998: A year when malpractice awards mushroomed. *Medical Economics*. 2000;7:26.

proportion of cases won by plaintiffs is only approximately one third prevailing with a range of 29-36% from 1993-98. Overall, general trends have been stable with fewer plaintiffs prevailing, but those that do involved a more substantial financial recovery.

An insurance industry analysis found a doubling of claims from 10.5 claims per 100,000 in 1980 to 17.5 claims per 100,000 in 1986.[7] There is pressure to settle however that manifests where only 4% of cases tried to verdict with favorable defense verdict returned in 72%.[8]

An early review of the "malpractice crisis" analyzed cases from 1970 to 1988 and found small incremental increases in claims filed (61%), claims paid (13.5%), premium (7.2%) and average claim (19.9%) to a mean recovery of $177,500.[9] Interestingly, they cited an increased prevalence of litigation in the US compared to Canada with a five-fold suit rate with a 33% increase in payment accompanied by a ten-fold increase in insurance premium here.[10]

Clearly, one of the major drivers of the litigation process is the venue, which dictated both likelihood of success and size of the recovery.

EPIDEMIOLOGY OF ERROR:

Risk prevention begins with analysis of our current experience for trends to delineate areas of improvement. Kravitz performed an analysis of the epidemiology of error evaluating 1317 claims defining three areas of concern.[11] First, most error was found to involve patient management issues in 48-75% of cases with more significant injury accompanied by a higher award. Secondly, this was followed by technical performance issues in 3-9% for failure to perform testing or monitoring. Lastly, medical and nursing staff coordination was implicated in 9% of the cases. Ideally, using such an analysis allows one to identify and improve problem prone patient care processes.

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7. Physicians and Surgeons Update: A special report. Vol 3. St. Paul Fire and Marine Insurance Company, St. Paul, Minnesota, 1986.

8. Loss Analysis, Claim and Suit Status by Policy Year, December 31, 1986. Chicago, Illinois State Medical Inter-Insurance Exchange, 1986.

9. Dewees DN, Trebilcock MJ, Coyte PC. The medical malpractice crisis: a comparative empirical perspective. *Law and Contemporary Problems.* 1991;54:271-51.

10. Nardi JB. St. Paul company expresses concern over developing medmal trends. *Medical Liability Reporter.* 1991;16:3-5.

Likewise, it is helpful to identify particularly problematic adverse events as well. The Harvard Medical Study III in the New York state analysis of 31, 429 patients found an overall claim rate of 0.13%, which increased twelve-fold to 1.5%, if an adverse event occurred in conjunction with the hospital stay.[12] This evidence would help to support the preemptive risk management practice of closed review of known adverse event cases.

Identification of specific presentations and disease status is also associated with a significant proportion of litigation. The Massachusetts Closed Claims Analysis (1975-93) found that 64% of claims occur in those presenting with chest pain, abdominal pain, wounds, fractures, pediatric fever/meningitis, epiglottitis, CNS bleeding, and abdominal aortic aneurysm cases.[13] They also noted a 25% increase in both incidence and payment associated with missed acute myocardial infarction (AMI) cases. Although helpful, this study is limited by the general nature of its high profile case recommendations.

However, an earlier analysis by Karcz evaluating 1988-90 claims allowed quantitative estimates of eight high risk areas accounting for 51% of claims and 55% of monetary losses.[14] This high risk incidence group included fractures (23%), chest pain (21%), abdominal pain (4%), subarachnoid hemorrhage (3%), wounds (2%), fever/meningitis (0.9%), epiglottitis (0.6%) and AAA (0.1%). Specific recommendations note that areas for improvement include failure of ED x-ray follow-up, heightened level of scrutiny with intoxicated patients and those with head injury.

Perhaps, most time and effort has and should be directed towards missed acute myocardial infarction (AMI). Missed AMI is associated with the highest rate of dollars lost amounting to an average $113,806-178,330 claim in 1989.[15]

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11. Kravitz RL, Rolph JE, McGuigan K. Malpractice claims data as a quality improvement tool. *JAMA.* 1991;266:2087-92.

12. Localio AR, Lawthers AG, Brennan TA *et al.* Relation between malpractice claims and adverse events due to negligence. *New England Journal of Medicine*. 1991;325:245-51.

13. Karcz A, Korn R, Burke MC, *et al.* Malpractice claims against emergency physicians in Massachusetts:1975-1993. *American Journal of Emergency Medicine.* 1996;14:341-45.

14. Karcz A, Holbrook J, Burke MC, *et al.* Massachusetts emergency medical closed malpractice claims: 1988-1990. *Annals of Emergency Medicine.* 1993;22:553-59.

15. Rusnak RA, Stair TO, Hansen K, *et al.* Litigation against the emergency physician: common features in cases of missed myocardial infarction. *Annals of Emergency Medicine.* 1989;18:1029-34.

Trends noted in these undiagnosed patients found the patients were younger, have atypical presentations and fewer diagnostic electrocardiograms (EKG's); while the physicians obtain a less detailed history, misread more EKG's, and were physicians with less emergency department (ED) experience, who routinely admitted fewer patients.

McCarthy's evaluation of 1050 chest pain patients documented a 1.9% missed AMI rate, and a varied demographic profile accompanied by a 5-9% estimate of inappropriate discharge.[16] It is self evident that higher risk patients are usually admitted, those with EKG changes, history of AMI, or use of nitroglycerine; while those who are discharged are less likely to have EKG changes. They did define a high-risk cohort where 25% of patients were discharged with ST segment elevation, 35% were discharged with an ischemic heart disorder history, resulting in a 25% mortality/complication rate.

Therefore, targeting both general and specific patient care trends, tracking adverse events in general and providing specific education along high profile disease pathways may prove to decrease the suit incidence.

DUTY OF CARE:

The specifics of negligence theory targets two areas of interest: duty of care and the standard of care. The duty of care is the condition precedent to any subsequent negligence analysis. The gradation of this physician-patient interaction established a continuum beginning with a "no duty of care" scenario featuring the informal "curbside" consultation.[17] A "potential duty" category dependent on the contractual relationship and content of the interaction exemplified by the "telephone consult." Lastly, the "established duty of care" exists for both "on-call" physicians as well as "house staff supervision" relationships.

There is a clear progression of liability based on the patient relationship in most emergency care encounters, where duty is solidly established. More varied encounters such as patient phone calls seeking medical information, are more nebulous but certainly in the emergency department setting it incurs a patient

16. McCarthy BD, Beshansky JR, D'Agostino RB, *et al.* Missed diagnoses of acute myocardial infarction in emergency department: results from a multicenter study. *Annals of Emergency Medicine.* 1993;22:579-82.

17. Fox BC, Siegel ML, Weinstein RA. "Curbside" consultation and informal communication in a medical practice: a medicolegal perspective. *Clinical Infectious Diseases.* 1996;23:616-22.

care obligation. Providers should be cautioned about offering this or similar advice. First, we are not permitted to diagnose or provide definitive medical advice. Second, we urge you to present yourself for evaluation and care. Third, even well intended admonitions to call their primary care physicians (PCP) may be viewed as a potential Emergency Medicine Treatment and Labor Act (EMTALA) violation inserting an ostensible insurance requirement before proper medical screening.

STANDARD OF CARE:

The crux of almost all malpractice issues is whether a deviation of the standard of care has actually occurred. The standard of care for negligence purposes is "a duty to use the degree of care and skill, which is expected of a reasonably competent practitioner in the same class to which he belongs acting in the same or similar circumstance." (Blair v. Eblen, KY 1970)[18]

The current malpractice model is to define two standards of care in an inductive logic strategy based on plaintiff and defense positions respectively. More specific standards are offered as customary practice guidelines based on medical organizations such as the American Medical Association (AMA), specialty societies such as the American College of Emergency Physicians (ACEP), and utilization review based on quality assurance standards, as well as hospital policy and procedures.[19]

"The medical standard brought to the attention of the court may have greater impact because it was developed by physicians and perhaps endorsed by a large number of prestigious physicians." Those medical standards are defined by incorporating expert testimony, journal published standards, court determined standards, and violation of state regulations.[19] Interestingly, the "same or similar location" standard has been abandoned in favor of a national standard due to improved communications and internet based learning resources.

A systematic process of error analysis notes some acceptable variation, where there are common discrepancies in the so-called "usual practice" standard amongst different providers. There are expected errors where a standard of perfection is not always achieved and not every error amounts to a malpractice

18. *Blair v. Eblen* 461 S.W.2d 370, 373 (Ky. 1970).

19. Fish R, Ehrhardt M. The standard of care. *The Journal of Emergency Medicine.* 1994;12:545-52.

case. Even economic pressures in medicine have been acknowledged as a factor in the analysis stressing a "prudent person standard" utilizing the best or safest alternative approach if resources are tight.

PHYSICIAN CREDENTIALING:

An examination of physician credentialing correlates in those who have lost malpractice insurance was performed in 920 high risk cases.[20] They established a demographic profile that found specialty overrepresentation, specifically obstetrics/gynecology (21%) and family practice (16%), age profile of 45-54 years, and interestingly no correlation to board certification or site of medical training—either foreign or national medical school[21].

Another risk cohort are physicians who have been disciplined by a state medical board, published by Morrison in a study that evaluated 375 California physicians. They defined an incidence of 0.24% of practicing physicians with disciplinary actions based on negligence/incompetence in 34%, alcohol/drug abuse (14%), inappropriate prescribing practice (11%), inappropriate contact (10%), and fraud (9%). These events were found to be more likely with more patient care encounters (odds ratio (OR) 2.56), greater than 20 years of practice (OR 2.02); while less likely to be found in female physicians (OR 0.44) and those with board certification (OR 0.42).

Lastly, analysis of hospital peer review and the National Practitioner Data Bank (NPDB) privilege action report of 4,743 hospitals found an incidence of 2.6 (0.40-52.3) adverse events per 100,000 admissions.[22] They noted some interesting trends including decreased reporting (11.6 to 10.0%)- with urban hospitals reporting a high incidence (OR 1.21) and teaching hospitals lower (OR 0.54) with the least reporting rate in the East South Central regional (1.49 cases). The contention is that with the prospects of public access to the National Practitioner Data Bank (NPDB) there will be a continued decline in case reporting defeating the overall purpose of the registry.

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20. Schwartz WB, Mendelson DN. Physicians who have lost their malpractice insurance. *JAMA.* 1989;262:1335-41.

21. Morrison J, Wickersham P. Physicians disciplined by a state medical board. *JAMA.* 1998;279:1889-93.

22. Baldwin LM, Hart LG, Oshel RE, *et al.* Hospital peer review and the national practitioner data bank. *JAMA.* 1999;282:349-55.

PATIENT PROFILE:

Characteristics of potential plaintiffs have been profiled in an analysis of legal office contact where six law offices received 730 calls at a rate of 12 calls per day per office with one in every thirty calls resulting in suit.[23] Patients interviewed have suggested factors that were related to their calls seeking legal aid including predominantly legal television advertising (73%) and poor provider relationship before the event (53%); also figuring prominently are financial concerns, such as a bill for medical services exceeding 50% of earned income (36%); in those who are unemployed (33%); and without health insurance (31%). Lastly, a group was deferred by a health care provider recommendation (27%). The most critical aspect of the study is that antecedent adverse relationships with a health care provider is a major driver towards filing a suit.

An unsubstantiated contention is that the "poor sue more." Mussman evaluated all Maryland claims (4037 from 1985-86) to demonstrate that the proportion of claims filed by the poor is less than predicted, presumably due to lack of sophistication.[24] This finding was corroborated by Burstin who evaluated 31,000 New York records isolating 51 cases demonstrating the lowest suit prevalence in the poor (OR 0.2), uninsured (OR 0.1) and the elderly (OR 0.2) with no effect of race or gender. They found that medical indigent care was actually safer then overall care provided based on lawsuit incidence.

Brennan went on to perform 10-year follow up on these 31,000 patients (51 cases) where over 90% were closed without incident.[26] Interestingly, an adverse event was only found in slightly over half (58%) of cases with negligence found in 55% of these cases. Therefore, in approximately half the cases there was no adverse event or negligence associated with the patient care event. The most predominant factor in the filing of a successful lawsuit is

23. Huycke LI, Huycke MM. Characteristics of potential plaintiffs in malpractice litigation. *Annals of Internal Medicine.* 1994;120:792-98.

24. Mussman MG, Sawistowich L, Weisman CS, *et al.* Medical malpractice claims filed by medicaid and non-medicaid recipients in Maryland. *JAMA.* 1991;265:2992-94.

25. Burstin HR, Johnson WG, Lipsitz SR *et al.* Do the poor sue more? *JAMA.* 1993;270:1697-1701.

26. Brennan TA, Sox CM, Burstin HR. Relation between negligent adverse events and the outcomes of medical malpractice litigation. *New England Journal of Medicine.* 1996;335:1963-7.

the presence of significant disability found in 87% of cases, associated with an average recovery of $201,250.

This would lead us to a search for factors other than negligence that would correlate with litigation.

PHYSICIAN PROFILE:

A physician demographic profile evaluating 9250 providers found risk correlates expressed as a risk ratio revealed litigation more common with male physicians (relative risk (RR) 3.1), specialty correlates with the highest risk found in neurosurgery (RR 12) and obstetrics (RR 7) with the lowest rates found in psychiatry and interestingly, in those who are mid-career in practice with peak age of 40 years ($p<0.001$). [27] They concluded once again that communication is key to minimizing risk.

A specific profile of obstetric cases after 10 year follow up found no correlation with previous claims experience compared by the NPDB or in technical quality of future practice.[28] However, a strong correlation with previous claims experience was noted in documentation, where malpractice cases were associated with a 7-fold increase in substandard (13%) compared to acceptable (2%) documentation.

There is a relationship established between past malpractice history and future claims. Bovbjerg evaluated all Florida claims (20,016) from 1975-1988 with the average physician receiving 0.9 claims per year in which the plaintiff succeeds in only 40% of cases, which were 17% small paid claims ($<30,000) and 23% large paid claims ($>30,000).[29] There were 59% of physicians who had practices for a mean of nine years without a claim, while 13% had one paid claim and 7% went on to have multiple paid claims.

Further analysis suggested that any baseline claim increased the likelihood of subsequent claims of varying degrees for multiple claims (OR 2.33), large claims (OR 2.42) and interestingly small claims (2.84) were associated with

27. Targin MI, Wilczek AP, Karns ME, *et al.* Physician demographics and the risk of medical malpractice. *The American Journal of Medicine.* 1992;93:537-42.

28. Entman SS, Glass CA, Hickson GB, *et al.* The relationship between malpractice claims history and subsequent obstetric care. *JAMA.* 1994;272:1588-91.

29. Bovbjerg RR, Petronis KR. The relationship between physicians malpractice claims history and later claims. *JAMA.* 1994;272:1421-26.

the highest correlation to later claims.[29] Most importantly, a single unpaid claim doubled the odds of a later claim. Clearly the desired endpoint is to ensure physicians remain in the non-suited cohort of slightly over half of practicing physicians, rather than the suited cohort who tend to have more paid claims.

An obvious question is does residency training in emergency medicine make a difference? There appears to be a difference based on Branney's evaluation of 428 closed emergency medicine claims, where one fifth (18.9%) of 81 cases involved indemnity paid, with an average indemnity of $76,721 with defense costs of $17,775 per case.[30] The emergency medicine trained physicians were associated with two fold fewer paid claims (13.3 vs. 22.4%, p=0.04), one half of the total indemnity 28.5% ($1,773,524) vs. 71.5% ($4,440,951).

There was no difference however in mean indemnity or cost of defense per closed claim, indicating an increased number of claim discrepancies between the groups. They concluded that non-emergency medicine trained physicians had twice the malpractice indemnity than for emergency medicine trained physicians, $4905 vs. $2212 annually.

Patient satisfaction has a direct impact on malpractice experience with an increased frequency of filing, but no increased cost due to excess recovery. Obstetric patients, who stated they felt rushed, never received explanations for tests, or felt ignored, were more likely to sue.[31] This high frequency malpractice group had twice as many patient complaints. A caveat however, is that this increase in litigation did not result in a higher financial outlay. Although, suits were filed they were not viewed as meritorious by fact finders.

Another issue is the possible correlation between patient complaints and malpractice risk. Hickson evaluated 645 physicians between 1992-1998 finding that both patient complaints and risk management events correlated with being a surgical vs. a medical practitioner (63 vs 32%) as well as volume of clinical activity.[32] Logistic regression revealed a correlate between lawsuits and

30. Branney SW, Pons PT, Markovchick VJ, Thomasson GO. Malpractice occurrence in emergency medicine: does residency training make a difference? PubMed-indexed for MEDLINE. 2002.

31. Hickson GB, Clayton EW, Entman SS, et al. Obstetricians prior malpractice experience and patients satisfaction with care. *JAMA.* 1994;272:1583-87.

32. Hickson GB, Federspiel CF, Pichert JW, Miller CS, Jaeger JG, Bost P. Patient complaints and malpractice risk. *JAMA.* 2002;287:2951-2957.

complaints even when adjusted for clinical data. However, some trends raised issues of bias with female physicians receiving fewer complaints.

A proactive plan can be generated to minimize risk based on information provided by successful provider profiles. Levenson evaluated a group of primary care and surgical physicians to generate a claim prediction model based on multivariate analysis with 57% (33-73%) accuracy.[33] Risk minded physicians tended to provide more statements of orientation—what to expect, timing and flow, laughed more and used humor, used facilitation techniques—solicited opinion, checked understanding and encouraged discussion - than the group who didn't make them more prone to suit. Lastly, a longer visit (18.3 v. 15.0 minutes) was an independent predictor of improved patient perception and satisfaction with the visit.

Therefore, the goal of this exercise would be to incorporate successful practice styles to prevent adversarial encounters, avoid malpractice risk of filing, and favorably impact on the likelihood of the plaintiff prevailing in the action.

PHYSICIAN IMPACT:

An often overlooked component of the medicolegal analysis is the effect on the physician, as well as on the patient. The impact of the doctor-patient relationship has been defined to include negative impact on practice and well being, and was more pronounced if there was personal involvement, a discrepant opinion, interaction or problematic communication between the patient and physician.[34] The solution to this problem may be achieved by implementing both peer review and alternative dispute resolution.

A comprehensive association of self reported reaction to malpractice trials reported a typical physician demographic profile to include male gender (92%); average age (51 years); specialty representation—surgery (39%), internal medicine (25%), family practice (17%), obstetrics/gynecology (14%), board certification (76%); and solo practice (44%) in a suburban (52%), urban (36%), or rural (8%) location.[35]

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33. Levinson W, Roter DL, Mullooly JP, *et al.* Physician-patient communication. *JAMA.* 1997;277:553-59.

34. Shapiro RS, Simpson DE, Lawrence SL, *et al.* A survey of sued and non-sued physicians and suing patients. *Archives of Internal Medicine.* 1989;149:2190-96.

35. Charles SC, Pyskoty CE, Nelson A. Physicians on trial—self reported reactions to malpractice trials. *The Western Journal of Medicine.* 1988;3:358-60.

Further analysis of specific psychological issues found that an emotional reaction to the malpractice suit was universal with 97% adversely affected by the entire process (52%), not just the litigation (16%).[36] There was a wide range of symptoms encountered, described as inner tension (86%), depressed mood (80%), frustration (78%), and anger (70%) with the physician who loses exhibiting more guilt (67%) than those that prevail (48%). Interestingly, insight is often poor in a malpractice suit, where the physician feels the case was not justified in most (88%) of the cases.

The physician psychological reaction was analyzed in a rural model where litigation is much less frequent.[37] The symptom clusters included psychologic trauma, job strain, shame and doubt. These symptoms decrease with time, winning the case or greater age of the physician. Coping systems have better results in women. Typically two years are required to return to baseline functional status and are facilitated by techniques such as cognitive reforming or support systems.

Cognitive strategies attempt to modify the physician's "ostrich approach," where the suit is obviously due to circumstances outside of medicine to a modified practice model to avoid suit, which is more appropriate. They defined a higher risk group to include those who were female, younger, not board certified, have less clinical experience, were more clinically active, have previous suits and are involved in a high risk specialty. Interestingly, the risk management strategies are found to be of less value by fearful physicians.

Malpractice risks are self evident, but an important part of the process in addition to prevention is rehabilitation to ensure that your practice forward from this point is not impaired by your psychological response to the lawsuit.

RISK MONITORING AND INVERVENTION:

A key portion of a preemptive monitoring strategy is risk identification. O'Neill explored a proactive/self-reporting model for attending and house staff that was equivalent to peer review done by retrospective chart review identifying

36. Martin CA, Wilson JF, Fiebelman ND, *et al.* Physicians psychologic reactions to malpractice litigation. *Southern Medical Journal.* 1991;84:1300-04.

37. Schumacher JE, Ritchey FJ, Nelson LJ, *et al.* Malpractice litigation fear and risk management beliefs among teaching hospital physicians. *Southern Medical Journal.* 1995;88:1204-11.

more preventable events (62 v. 32%) at less cost ($15,000 v. 54,000).[38] They readily defined an effective self-referral process.

Analysis of the utility of practice guidelines was quite informative based on Hyam's review of 259 claims from 1990-92.[39] They found that clinical practice guidelines were used in only 6% of cases, but of interest were used in an inculpatory fashion twice as often than to exculpate (54 v. 23%) the physician. However, when used to exonerate the physician their evidentiary value was usually significant enough to result in dismissal.

More often than not attorneys with a medical malpractice specialization used these guidelines in a negative fashion when over 50% of their business was related to malpractice litigation. The message is clear, if you do choose to utilize clinical practice guidelines than the practitioners should understand them, and should be incorporated universally with two-year revision and update cycles. Clearly, having documents and clinical protocols on hand but not being followed is disastrous from a defense perspective.

A sub-study of Karcz's earlier analysis of 252 Massachusetts malpractice claims (1980-87) with an average indemnity of $45,038 noted eight high risk areas: specifically chest pain, abdominal pain, wounds, fractures, pediatric fever/ meningitis, AAA, CNS bleeding and epiglottitis responsible for 90% of cases and 66% of dollar loss.[40] Implementation of Massachusetts American College Emergency Physician (MACEP) Guidelines, which emphasized check list reminder strategies, which preceded template charting systems cut financial losses by 23-46%.

An important question posed is "How do patients want physicians to handle mistakes?" evaluated in Witman's analysis of 149 patients.[41] The mistakes found were minor in 14%, major in 65% and almost universally (98%) of patients

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38. O'Neil AC, Petersen LA, Cook EF, *et al.* Physician reporting compared with medical record review to identify adverse medical events. *Annals of Emergency Medicine.* 1993;119:370-76.

39. Hyams AL, Bradenburg JA, Lipsitz SR, *et al.* Practice guidelines and malpractice litigation: a two way street. *Annals of Internal Medicine.* 1995;122:450-55.

40. Karcz A, Holbrook J, Auerbach BR, *et al.* Preventability of malpractice claims in emergency medicine: a closed claims study. *Annals of Emergency Medicine.* 1990;19:865-73.

41. Witman AB, Park DM, Hardin SB. How do patients want physicians to handle mistakes? *Archives of Internal Medicine.* 1996;156:2565-69.

desire acknowledgment of the error. Patients stated they were more likely to consider litigation if the pertinent information was not disclosed. This contention was borne out by an increase in the proportion of suits filed in the failure to disclose (20%) cohort compared to the informed by physician category (12%).

This strategy has been tested in an "extreme honesty is the best policy" risk management approach.[42] The strategy was applied to the Veteran's Affairs Medical System (1990-97) with a pre-intervention baseline of $720,000 for court judgments, $205,000 for adjudication settlements and $35,000 for pre-adjudication settlements. They used a system that provided notification of negligence, a face to face meeting, and assistance in filing a legal claim. Their results were truly astounding. There was an increase in the number of claims filed but this was accompanied by a decreased total financial outlay with the average claim decreased by over 50% to $15,622 resulting in significant financial savings for the hospital.

As anticipated, an augmented listening and communication program can also prove advantageous. Lester described a program where 160 patients had both a positive and negative sham interaction video recorded and compared to litigation outcome.[43] The correlates to a litigious encounter included both a negative patient interaction as well as diagnostic uncertainty. The use of better communication and a more definitive diagnosis minimized those events. This provides an interactive paradox where a well thought-out primary and differential diagnosis discussed with patients is often too complicated and viewed as undesirable from their perspective.

EMS RISK:

Until recently EMS liability has been limited in scope. Colwell published their experience from 14,687 ambulance runs noting one claim per 5,084 runs or a claim rate of 0.19% claims per 1,000 runs.[44] However only 13% of claims actually progressed to suit with twice as many motor vehicle accident (32%) claims compared to medical negligence (35%) causes of action. The average

42. Kraman SS, Hamm G. Risk management: extreme honesty may be the best policy. *Annals of Internal Medicine.* 1999;131:963-67.

43. Lester GW, Smtih SG. Listening and talking to patients a remedy for malpractice suits? *Western Journal of Medicine.* 1993;158:268-72.

44. Colwell CB, Pons P, Blanchet JH, *et al.* Claims against a paramedic ambulance service: a ten year experience. *Journal of Emergency Medicine.* 1999;17:999-1002.

claim loss was $52,727 ($1,000-440,200) with the likelihood of prevailing in negligence cases (100%), while success very unlikely in cases of MVA (10%) or with behavioral abnormalities (12.5%).

Likewise, Goldberg et al retrospectively reviewed over a 10 year time period (1976-87) over two million calls with one million transports and 60 claims in a metropolitan ambulance system.[45] They noted one lawsuit per 27,371 encounters or 17,995 transports with an increase in the number of suits filed but, of these 38% were settled with no or nominal payment.

A particularly problematic area is found in the area of transport refusal, where Selden described this as the cause in a majority of lawsuits, 50-90% of 2,698 cases. They found only 65% of patients met criteria for appropriate release.[46] There were 35% of cases judged to be inappropriately released, where the specific documentation deficiencies cited included risk of refusing care (51%), vital signs (34%), mental status (26%), type of impairment (13%) and history and physical factors (2%).

It is highly desirable to transport all patients, just "signing the form" is not enough without adequate informed consent regarding the risk and benefits of not being evaluated at a health care facility to avoid liability.

CONCLUSION:

Overall, it appears that in 70% of cases physicians are exonerated in the malpractice litigation process. The outcome probably rests with the following factors. First, how long after the incident did the patient die? Second, whether the patient complained of significant symptoms that were ignored by the examining physician. Third, if the physician made a recommendation that was not followed by the patient.

As evidenced by this discussion, the outcome of malpractice litigation is complex, being determined by a host of factors including venue, disability, and personal affinity of jury for patient and physician. Of somewhat less importance is the actual presence of an adverse event or standard of care deviation.

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45. Goldberg RJ, Zautcke JL, Koenigsberg MD, *et al.* A review of prehospital care litigation in a large metropolitan EMS system. *Annals of Emergency Medicine.* 1990;19:557-61.

46. Selden BS, Schnitzer PG, Nolan FX, *et al.* Medicolegal documentation of prehospital triage. *Annals of Emergency Medicine.* 1990;19:547-51.

In any event, the object of a comprehensive risk management program would be to define the incidence of the problem. Next, identification of problematic associations or behaviors should be profiled, while an intervention to decrease the incidence of these factors is undertaken. Lastly, a comprehensive evaluation and assessment strategy should in a regular fashion target quality improvement to decrease the absolute incidence of these events.

Cleary, the more desirable approach is proactive risk prevention, not retrospective attempts at reconstruction and rehabilitation of the patient encounter.