

MACEP Risk Management Course

Module 8: Practice Environment

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Course Objectives

- Be aware of the general liability trends for emergency physicians.
- Understand the trends of liability in pre-hospital care that may impact Medical Control Physicians and EMS Physician Directors.
- Know the factors necessary to assess properly patient capacity/competency and the documentation necessary to minimize liability risk in the event of a bad outcome.
- Understand the impact of the use of Clinical Guidelines on malpractice liability.
- Recognize the malpractice risks associated with the use and supervision of mid-level providers in emergency medicine.
- Understand the common documentation pitfalls associated with malpractice risk in both paper and electronic formats.
- Understand the importance of good communications on reducing malpractice risk.
- Understand the importance of robust discharge instructions and good systems of managing incomplete test results.

Emergency Medicine Overview

The Harvard Medical Practice Study demonstrated that between 1.5- 3% of all adverse events that affected hospitalized patients occurred in the emergency department. More important, most of the errors, which occurred in emergency departments, were deemed to be attributable to negligence.¹ The causes of this error rate and the resulting claims of malpractice are well recognized: emergency physicians practice in a multi-faceted organization with complex structures caring for acutely ill patients, at all times of day and night, working in a time pressured environment, beleaguered by overcrowding, frequent interruptions, incomplete information and the lack of a continuing patient-physician relationship.

Emergency physicians rank third behind obstetrician/gynecologists and surgical specialists in frequency of malpractice claims. Overall, approximately 50% of emergency physicians have been sued, 31% more than once, and approximately 8-9% of emergency physicians are sued annually.^{2,3} Data from the late 1980s demonstrated that physician experience and board certification were significant factors in closed claims.⁴ However, with significant emergency care

provider demographic changes in recent years, the significance of these factors may have changed. Approximately 30% of all emergency medicine malpractice suits result in an indemnity payment.^{3,5} Between 2005 and 2009, the average indemnity payout for emergency medicine was \$468,000, 12% higher than other specialties during the same time period.³ Of those EM cases that paid indemnity, 95% were closed by settlement. Of all the EM cases decided by verdict, 85% were decided in favor of the defendant.⁵ Some studies looking at claims closed between 1987 and 2007 have demonstrated that the most common “misadventure” in emergency medicine, as categorized by the insurer, was failed or delayed diagnosis. These cases comprised about 38% of claims,^{5,6,7} with one insurer indicating the rate may be as high as 80%.^{3,8} Negligent treatment was the issue in approximately 12-16% of cases.^{3,9} Other error types include medication related error in 4.5% and procedure related error in 2.5%.³ No medical error was identified by the insurer in more than 18% of cases.^{3,5,7}

EMS

Although claims against pre-hospital providers only occurs in approximately 1 in 27,000 patient-paramedic encounters, the frequency of claims per encounter relating to pre-hospital care appears to be rising.¹⁰ Nearly one third of cases relate to cardiac arrest. Other common cases include traumatic deaths (22%), non-lethal trauma (15%), and respiratory conditions (12%).¹⁰ The resource hospital and EMS Medical Director are rarely named.^{10,11} One area of higher potential risk for medical control physicians is patient refusal of care and transport.¹² Patients older than 65 years of age and those patients who again seek care after initially refusing care and transport are significantly more likely to require hospitalization within 48 hours of the initial refusal of pre-hospital care and transport.^{13,14} Even if the EMS provider did not contact the medical control physician, the physician may be liable for that refusal of care decision. Since studies have shown an electronic physician-patient communication significantly increases the acceptance of care and transport, especially in the high-risk patients such as those with altered mental status, medical control physicians should encourage pre-hospital providers to be liberal in initiating a patient-physician communication in cases for refusal of care and/or transport.^{12,15,16,17} Medical control physicians should carefully evaluate the interaction to determine whether the patient has the capacity to make the refusal decision. Robust documentation of this interaction is often inadequate by the field personnel.¹⁸ Appropriate documentation can be a logistical challenge for the emergency physician but may be critical if the refusal patient has a bad outcome.¹⁹

Assessing Competency/Decision Making Capacity

Alleged failure to obtain informed consent or refusal is a well known basis for malpractice claims; this type of claim can involve emergency physicians.^{20,21} Obtaining informed consent or refusal, when appropriate, is critical for mitigating risk in emergency care, both in the pre-hospital setting as noted previously, and within the emergency department. The first step in this process is to determine whether a patient is competent to make autonomous health care decisions. Necessary elements needed to ensure the patient has clinical decision-making capacity include: the patient has a set of values and goals (typically assumed); the patient is able to understand and communicate information; the patient is able to deliberate and reason about the

decision being made; and, if possible to complete, mini-mental status and neurological exams should not demonstrate any impairment affecting decision making.²²

If the patient cannot make autonomous health care decisions, and the temporal situation allows, the physician should first seek out a Health Care Proxy and in the absence of one, a substitute decision maker such as spouse, parent etc. In the absence of a competent patient, health care proxy or other substitute decision maker, the physician should act in the patient's best interests. Once the patient is determined to have autonomous health care decision-making capacity or a health care proxy or substitute decision maker is determined, the physician must obtain and document the informed consent discussion. The important elements of informed consent include:

- Discussions should occur in a language and at a level the patient can understand.
- The risks and benefits of all treatment options including the obvious and doing nothing, and even those the emergency physician is not recommending, should be discussed.
- The patient should paraphrase the relevant discussion points and state the reason(s) for her or his decision.

The more risky and unexpected the patient's decision is regarding the options, the greater the need to carefully evaluate competency, provide full information regarding the risk and benefits of the available options, and to document the decision making process in detail.²³ For particularly unconventional decisions, with the competent patient's permission, the physician may consider involving family or friends to help the decision maker appreciate the risks and benefits of the options.

Protocols/Guidelines/Clinical Decision Rules

Some physicians are reluctant to use practice guidelines, concerned that their use will reduce the physician's clinical decision-making authority or enable criticism of their practice as being based on economic rather than medical considerations.^{24, 25} Studies have demonstrated that the use of clinical guidelines results in fewer malpractice cases because the use of the guidelines were judged by the litigant's attorney to be exculpatory evidence (exonerating the physician).^{26, 27, 28} However, when a suit was brought, guidelines, and the lack of adherence to them, was most commonly utilized as inculpatory evidence (implicating the physician).^{27, 29, 30} In only 23% of these cases, was the validity of the guidelines challenged.²⁷

While most of the studies regarding clinical guidelines lie outside of emergency medicine, Karcz et al. concluded that the use of clinical guidelines for high risk areas of emergency care would likely have resulted in significantly fewer closed claims with indemnity.⁸ Although guidelines do not comprise legal standards for care, they do provide the courts with a benchmark against which to judge clinical care.²⁸ While the use of a clinical guideline or clinical decision rules is up to the individual physician, each physician must be thoroughly knowledgeable of the existence and utility of a clinical practice guideline for a given patient situation and recognize that following established clinical guidelines will generally demonstrate that the standard of care was met. Conversely, if a guideline exists and it is not utilized by the physician, liability is more likely.^{25, 27} In some states, such as Maine and Minnesota, use of accepted guidelines for inculpatory liability purposes is limited or forbidden while use for exculpatory purposes is not restricted.²⁷

Supervision of Mid-Level Providers and Physicians in Training

Data from the CDC demonstrates that the proportion of emergency department patients seen by mid-level providers (MLPs) including nurse practitioners (NPs) and physician assistants (PAs) increased from 5.5% in 1997 to 12.7% in 2006.³¹ Over the same period the percentage of emergency departments using MLPs increased from 28% to 77%, with academic centers utilizing MLPs slightly less frequently.^{31, 32} MLPs are most commonly utilized in lower acuity urgent care type settings.^{31, 32, 33, 34} Slightly over half of the MLP patients were also seen by the supervising physician.³¹ Numerous studies have cited improvements in wait times and patient satisfaction with the addition of mid-level providers, improvements which may be assumed to mitigate litigation risk. However, few studies have evaluated the quality of medical care provided by mid-level providers in the emergency department setting. One of the few studies to do so demonstrated that in the care of asthma, unsupervised MLP quality of care was not equivalent to supervised MLP care.^{35, 36, 37}

Most of the litigation involving mid-level providers has historically focused on the extent of supervision of that provider rather than on the mid-level provider's performance.³⁸ Nurse practice acts vary state-to-state, with some states having independent practice for NPs (not requiring any physician involvement), some with collaborative agreement required with a physician.³⁹ Statutory regulation of Physician Assistants also vary from state to state with regards to the number of PAs a physician can supervise, the number of physicians who can supervise one PA, and physician liability for PAs.⁴⁰ Physicians that are supervising NPs and/or PAs must understand their responsibilities and liability risks as regulated by their state. Physicians must understand that they can be liable for patient care and outcomes even if they never personally interacted with the patient, and in fact may be more vulnerable if they did not see the patient.

Three legal bases commonly used to impute liability from the MLP to the physician include negligent supervision, *respondeat superior* (vicarious liability based on employer-employee or principal-agent relationship but in the medical field may apply to any assistant working under the physician) and negligent hiring (applicable to those charged with the hiring decision).⁴⁰ There are no studies or reviews evaluating liability risk for supervising physicians in the emergency department setting. However, anecdotally, the two highest indemnity cases for ProMutual Closed Case Analysis of 2005-2009 involved the supervision of MLPs.³ Given the dramatic rise in utilization of mid-level providers and the recent success of litigants involving supervision duties, there will likely be more malpractice cases based at least in part on claims of inadequate supervision. Emergency Physicians in these collaborative and supervisory relationships need to ensure that the MLP exercises good clinical judgment and appropriate utilization of resources including consultation and laboratory and imaging services. Per expert witness opinion "The physician supervisor 'trains' the MLP to his threshold of clinical suspicion and knows when he has reached that threshold."³

Supervision of physicians in training, residents and fellows, carries similar responsibility and liability risks. One large study of the closed claims involving missed diagnosis at 20 academic centers and 26 non-academic centers demonstrated that inadequate supervision of trainee physicians was a significant contributing factor in more than half of all claims.⁴¹ Emergency physicians must recognize their significant liability for physician-in training and MLP care

provided under their “supervision” whether or not the physician actually interacted with the specific patient or the “supervised” provider. A suit in which the physician did not document the direct supervision will likely be much harder to defend against than if direct supervision was demonstratively provided.

Documentation

Closed claim analysis has clearly indicated that the lack of documentation of a careful history and physical examination is strongly associated with an indemnity payment.^{4, 42} The axioms “If you didn’t document it, it didn’t happen” and “If you did document it, you have proof that it did happen” or similar paraphrases which have been cited for decades when discussing documentation and risk management remain true.

A new and critically important aspect of risk management documentation is the ever expanding use of electronic medical records to replace paper or dictated records. Among the advantages of free-formatted paper or dictated records are the ability to individualize the documentation to accurately describe the patient encounter as well as the ability to later edit and complete the documentation. Inherent disadvantages of these forms of documentation include the cost and often increased time to record completion. Additionally, these suffer from the common tendency to incompletely document important details of the history, physical exam, re-examinations and documentation critical to understanding the time course of events.

Although some studies have shown that overall emergency physician documentation is improved with the use of a structured, pre-formatted chart, such as templated paper charts, these can suffer from check box use which may not accurately describe the patient or situation and space limitations which discourage individualized and thorough documentation.^{43, 44, 45}

The use of electronic medical records does generally result in more information being documented with greater clarity regarding the source of the information and the time course of events. Electronic medical records more easily incorporate care improvement and risk management tools such as generating complaint-specific key factors to consider and document, generating differential diagnoses to consider, incorporating allergy and drug interaction support and other forms of clinical decision support, which can reduce risk of error. However, electronic medical records also introduce new forms of documentation related error. As with pre-formatted paper charts, check box documentation may not describe the patient individually and accurately. The electronic systems must support custom entries/text so that the details of the current visit can be accurately and thoroughly documented.

Electronic template errors such as utilizing an incorrect template, documenting an incorrect side of the body repeatedly, documenting a full male physician exam on a female or vice versa, referring to a male as “she” throughout the record, all can be used to erode a practitioner’s credibility, even if the detail does not directly impact the direct basis for the claim.^{45, 46}

Generating a voluminous electronic chart takes far less time than historically possible, leading to the risk that the volume of documentation may exceed that appropriate to the complaint or diagnosis, again negatively impacting the physician’s credibility. Another area of potential risk is the use, often by cutting and pasting, of previously generated information, often by “cutting and pasting,” without verification of current applicability.⁴⁵ In cases where large amounts of

previously written text is imported, consider adding a notation as to the source such as “the history provided by the patient today is not significantly different from that on the previous visit”.⁴⁵

Information that is entered must be case-specific, accurate and relevant. Inconsistencies between nursing or other provider documentation and the physician’s documentation must be specifically addressed by the physician. With use of drop down menus and other speed enhancing tools, critically important key documentation becomes as fast as a click of a mouse; mistakes such as selecting the wrong medication or dose can occur just as fast.

One of the dangers of the electronic record is that small, non-critical errors are easily made and overlooked, and although the error(s) may not be directly related to the medical decision making they can detract from the physicians credibility by implying a lack of attention to detail. This has resulted in a new risk management axiom for electronic medical records; “look twice, click once”.⁴⁵ Careful review of the chart before finalizing/signing is imperative. ProMutual’s reviews of various insured Emergency Medicine groups potential documentation risks demonstrate that the most prevalent documentation issues are the failure to review family history, the lack of documentation of medical decision-making, including correlating the exam and test results with the differential diagnosis and inconsistent documentation of a reassessment before discharge. Frequently the documentation of reassessment is limited to a non-specific, generic “improved” which may not be specific enough to be helpful to the provider during retrospective review.

Finally, as is true for all medical record modalities, all edits to an existing document completed after the fact, must be absolutely clear as to the time and date of the entry, a function that is generally built into an electronic format. Otherwise any changes will be closely scrutinized and potentially utilized to create a perception that there was an attempt to be deceptive.

Communications

The style and completeness of a physician’s communications with a patient is an indisputably significant mitigating or exacerbating factor affecting liability risk. Such communication not only encompasses physician-to-patient communication but must also include the opportunity for patients to express their concerns, questions and desires to the physician. Communication with the health care team is also extremely important. Nurse-physician communication must be open and any differences in the documentation between the nurse and the physician of the patient’s history, physical findings and clinical course must be addressed in the physician’s record.

Handoffs are also an important communication issue. One study has shown that inadequate handoffs are a significant factor in approximately one quarter of closed claims involving missed diagnosis in emergency medicine.⁴¹ Handoffs are also a factor in cases involving negligence. The handoffs at risk include transitions between emergency physicians in the department, between emergency physicians to other emergency care providers in the department, between emergency providers and inpatient providers, and, especially at time of discharge, to primary care physicians and other outpatient providers.⁴⁷

The medical record must clearly document all the important aspects of the patient's history, physical and test findings, diagnosis, ongoing problems, medications, especially new or changed medications, follow-up referrals to primary care, specialist physicians and other providers, and other specific care or follow up instructions given to the patient. Critical findings such as newly discovered masses needing follow-up should be verbally communicated with that communication specifically documented.

Bridge/Holding Orders

Overcrowding in the emergency department has been well demonstrated to negatively impact patient care and therefore creates a high liability risk environment. There is no evidence that the fact the emergency department was overcrowded will be a valid defense for medical malpractice.⁴⁸ Despite widespread emergency physician belief to the contrary, there have been no studies or published reports demonstrating that emergency physician writing of temporary admitting orders, often termed "holding orders" or "bridge orders," is a significant liability risk. On the other hand, there have been numerous closed claim cases where emergency physicians have been sued when a patient had a bad outcome because of a delay in their initial evaluation by the emergency physician due to long wait times for an emergency department bed to be available. Though there had not been any patient-physician interaction, the presence of the patient in the waiting room was sufficient to find the emergency physician liable for the bad outcome.

The back-up of admitted patients as boarders in emergency departments has been well documented as a threat to quality care and patient safety. ACEP now supports the consideration of non-comprehensive, temporary admission orders being written by emergency physicians as one potential "high impact solution" to the crisis of ED crowding.⁴⁹ If temporary admitting orders are utilized, a thorough handoff should be documented and the responsibility for ongoing care after admission should be absolutely clear to nursing staff, the patient and providers.

Discharge Issues

Test Follow-up

One of the significant factors in emergency medicine closed claim cases involving a failure to diagnose is the failure to follow-up on abnormal tests, especially those tests results that are returned after the patient is discharged.⁵⁰ These tests include delayed lab results such as cultures and "send outs" or batched tests and radiographs and EKGs, which may have a preliminary reading by emergency physician and a later "final" read by another physician. Current systems often lack a reliable means of assuring that delayed test results are both adequately and timely addressed and documented.

Deficits in follow-up systems represent a clear liability risk to multiple physicians including the emergency physician who ordered the test, the emergency physician who addressed the result but did not document adequately, as well as the physician leaders who may not have assured a tight

follow up system.^{51, 52} Follow-up systems should ensure timely communication of the significant abnormal test result to the patient as well as the primary physician.^{50, 53} All follow-up decision making, resultant actions and communications must be carefully documented. For x-ray interpretation, EKG interpretation and other tests where there is a later quality assurance over-read of the initial emergency physician interpretation there should be a system in place to provide educational feedback to the original emergency physician and potentially others in the group.

Follow up Instructions

Just as good communications between providers is important, adequate communications with patients in language that the patient can comprehend is an imperative in the discharge process. Patients should be given an open opportunity to ask questions and verbally tested for comprehension of the instructions. Patient's low rate of recall of even well communicated verbal instructions shortly after discharge necessitates provision of all discharge instructions in legible written form. All patients with an unresolved problem or concern should be provided date and often time specific follow-up instructions including detailed symptom-specific instructions as to when to see an outpatient provider or return to an emergency department.

AMA

Emergency physicians largely believe that documenting the discharge of a patient who refuses recommended admission as "against medical advice" protects the physician from liability. Although such documentation is widely felt to be somewhat helpful and is therefore recommended, one of the few studies on this topic found that in the four studied cases, the 100% success rate of the defendants was felt to be more related to the inability of the plaintiffs to prove negligence rather than the documentation of discharge against medical advice. To gain the maximum potential protective effect of documenting "AMA" status, the emergency physician should, whenever possible, document all of the following:

- Patient competence including lack of significant levels of intoxication
- The occurrence of a risk/benefit discussion including alternatives as detailed in the "informed consent" discussion above
- The patient's reasons for the decision, ideally in the patient's own words
- A time specific recommendation for follow-up with alternatives if alternative are able to be provided
- Usual discharge instructions as best benefiting the situation
- An open invitation to return for care if the patient changes his/her mind or the situation changes
- Documentation of an attempt to inform the primary care physician regarding the AMA discharge as appropriate

Like the informed consent discussion, the AMA discussion is of critical importance and should not be delegated by the physician to nursing staff or other staff members. These should be personally completed by the physician and not delegated to others. On the other hand, if possible, nursing staff should be present as witnesses to the discussion and if the patient wishes, family and friends as well. Even with all of these factors documented, the most important liability

reducing approach is to ensure, whenever possible, that the medical care is in accordance with standard practices.^{22, 54}

Summary Points

- The most common cause of a malpractice suit in emergency medicine relates to a perceived delayed or failed diagnosis.
- The liability risk for Medical Control Physicians relates to pre-hospital refusal of transport and care decisions.
- Emergency physicians must be careful in their assessment of patient capacity/competency for medical decision- making and be thorough in the associated documentation.
- The prudent use of well-accepted Clinical Guidelines will generally reduce liability risk.
- The emergency physician is liable for all care rendered by mid-level providers and physicians in training who are under their supervision.
- Careful and thorough documentation and communication with other providers are paramount to minimizing liability risk. Although the specific errors/deficiencies that occur most commonly in the electronic environment will be different from the paper or dictated documentation environment, attention to detail in documentation remains critically important.
- Robust discharge instructions and ensuring good systems of managing incomplete test results are important patient care and risk management tools.

Module 8: Practice Environment References

1. Leape LL, Brennan TA, Laird N, Lawthers AG, Localio R, Barnes BA, Hebert L, Newhouse JP, Weiler PC, Hiatt H. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. *N Engl J Med* 1991;324:377-84.
2. Kane CK. Medical Liability Claim Frequency: A 2007-2008 Snapshot of Physicians in American Medical Association Policy Research Perspectives. 2010
3. Medical Professional Mutual Insurance Company (“ProMutual”); Closed Case Analysis, *Emergency Medicine* 2005-2009
4. Rusnak RA, Stair TO, Hansen K, Faslow JS. Litigation Against the Emergency Physician: Common Features in Cases of Missed Myocardial Infarction. *Ann Emerg Med* 1989;18:1029-34
5. Brown TW, McCarthy ML, Kelen GD, Levy F. An Epidemiologic Study of Closed Emergency Department Claims in a National Database of Physician Malpractice Insurers. *Acad Emerg Med* 2010;17:553-60
6. Karcz A, Holbrook J, Burke MC, Doyle MJ, Erdos MS, Friedman M, Green ED, Iseke RJ, Josephson GW, Williams K. Massachusetts Emergency Medicine Closed Claims: 1988-1990. *Ann Emerg Med* 1993;22:553-9
7. Selbst SM, Friedman MJ, Singh SB. Epidemiology and etiology of malpractice lawsuits involving children in US emergency departments and urgent care centers. *Pediatr Emerg Care*. 2005; 21(3):165-9
8. Karcz A, Holbrook J, Auerbach BS, Blau ML, Bulat PI, Davidson A, Docimo AB, Doyle MJ, Erdos MS, Friedman M, Green ED, Hobbs ET, Iseke RJ, Josephson GW, Kline J, Moyer P, Shea DJ, Soslow AR, Testamata AM, Woodward AC. Preventability of Malpractice Claims in Emergency Medicine: A Closed Claims Study *Ann Emerg Med* 1990;19:865-73
9. Karcz A, Korn R, Burke MC, Caggiano R, Doyle MJ, Erdos MJ, Green ED, Williams K. Malpractice claims against emergency physicians in Massachusetts: 1975-1993. *Am J Emerg Med*. 1996;14(4):341-5
10. Goldberg RJ, Zautcke JL, Koenigsberg MD, Lee RW, Nagorka FW, Kling M, Ward SA. A Review of Prehospital Care Litigation in a Large Metropolitan EMS System. *Ann Emerg Med* 1990; 19(5):557-61
11. Morgan DL, Wainscott MP, Knowles HC. Emergency Medical Services Liability Litigation in the United States: 1987-1992. *Prehospital and Disaster Med* 1994;9(4):214-21
12. Hoyt BT, Norton RL. Online Medical Control and Initial Refusal of Care: Does It Help to Talk with the Patient? *Acad Emerg Med* 2001;8:725-30

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13. Burstein JL, Henry MC, Alicandro J, Gentile D, Thode HC Jr, Hollander JE. Outcome of patients who refused out-of-hospital assistance. *Am J Emerg Med* 1996;14(1):23-6
 14. Moss ST, Chan TC. Buchanan J, Dunford JV, Vilke GM. Outcome study of pre-hospital patients signed out against medical advice by field paramedics. *Ann Emerg Med* 1998; 31(2):247-50
 15. Burstein JL, Hollander JE, Delagi R, Gold M, Henry MC, Alicandro JM. Refusal of out-of-hospital medical care: effect of medical-control physician assertiveness on transport rate. *Acad Emerg Med* 1998;5(1):4-8
 16. Cone DC, Kim DT, Davidson SJ. Patient-initiated refusals of prehospital care: ambulance call report documentation, patient outcome, and on-line medical command. *Prehosp Disaster Med* 1995;10(1):3-9
 17. Alicandro J, Hollander JE, Henry MC, Sciammarella J, Stapleton E, Gentile D. Impact of internentions for patients refusing emergency medical services transport. *Acad Emerg Med* 1995;2(6):430-5
 18. Stuhlmiller DFE, Cudnik MT, Sundheim SM, Threlkeld MS, Collins TE. Adequacy of Online Medical Command Communications and Emergency Medical Services Documentation of Informed Refusals. *Acad Emerg Med* 2005;12:970-7
 19. Weaver J, Brinsfield KH, Dalphond D. Pre-hospital refusal-of-transport policies: adequate legal protection? *Prehosp Emerg Care* 2000;4(1):53-6
 20. Gorney M, Martello J, Hart L. The medical record. Informing your patients before they consent. *Clin Plast Surg* 1999;26(1)57-60, vi-vii
 21. Liang BA, Zivin JA. Empirical Characteristics of Litigation Involving Tissue Plasminogen Activator and Ischemic Stroke. *Ann Emerg Med* 2008;52:160-4
 22. Magauran BG. Risk Management for the Emergency Physician: Competency and Decision-Making Capacity, Informed Consent, and Refusal of Care Against Medical Advice. *Emerg Med Clin N Am*. 2009;27:605-14
 23. Gutheil TG. Getting it on Record - and Getting it Right, a Massachusetts Medical Society On-Line Risk Management Course. Oct 2010
 24. Jacobson PD. Legal and policy considerations in using clinical practice guidelines. *Am J Cardiol* 1997;80(8B);74H-79H
 25. Burroughs CE. The use of practice guidelines in Wisconsin for liability protection. *Wis Med J* 1994;93(2):69-75
 26. Foster C. Civil procedure, trail issues and clinical guidelines. In: Tingle J, Foster C. eds.: *Clinical guidelines: law, policy and practice*. London: Cavendish 2002:111-20

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27. Hyams AL, Brandenburg JA, Lipsitz SR, Shapiro DW, Brennan JD. Practice Guidelines and Malpractice Litigation; A Two-Way street. *Ann Intern Med* 1995;122:450-5.
 28. Hurwitz B. How does evidence based guidance influence determinations of medical negligence. *BMJ* 2004;329:1024-8.
 29. Ransom SB, Studdert DM, Dombrowski MP, Mello MM, Brennan TA. Reduced Medicolegal Risk by Compliance with Obstetric Clinical Pathways: A Case-Control Study. *Obstet Gynecol* 2003;101:751-5
 30. Agrawal P, Kosowsky JM. Clinical Practice Guidelines in the Emergency Department. *Emerg Med Clin N Am.* 2009;27:555-67
 31. Menchine MD, Wiechmann W, Rudkin S. Trends in midlevel provider utilization in emergency departments from 1997 to 2006. *Acad Emerg Med* 2009;16(10):963-9
 32. Counselman FL, Schafermeyer RW, Garcia R, Perina DG. A survey of academic departments of emergency medicine regarding operation and clinical practice. *Ann Emerg Med.* 2000;36(5):446-50
 33. Ginde AA, Espinosa JA, et al. Use of midlevel providers in US EDs, 1993-2005: implications for the workforce. *Am J Emerg Med* 2010 Jan;(28(1):90-4
 34. Stead LG, Boenau I, Skiendzielewski J, Counselman FL. A survey of academic departments of emergency medicine regarding operation and clinical practice: two years later. *Acad Emerg Med.* 2003;10(4):393-6
 35. Carter AJ, Chochinov AH. A systematic review of the impact of nurse practitioners on cost, quality of care, satisfaction and wait times in the emergency department. *CJEM.* 2007;9(4):297-9
 36. Ducharme J, Alder RJ, Pellitier C, Murray D, Tepper J. The impact on patient flow after the integration of nurse practitioners and physician assistants in 6 Ontario emergency departments. *CJEM.* 2009;11(5):455-61
 37. Tsai CL, Sullivan AF, Ginde AA, Carmargo C. Quality of emergency care provided by physician assistants and nurse practitioners in acute asthma. *Am J Emerg Med.* 2010; 28(4); 485-91.
 38. Hershey N. Suit Arising from Physician Assistant's Services Raises Supervision Questions. *Hospital Law Newsletter* 2002;19(6):2-3
 39. American College of Nurse Practitioners website - www.aanp.org
 40. Gore CL. A Physician's Liability for Mistakes of a Physician Assistant. *J Leg Med* 2000;21:125-142
 41. Kachalia A, Gandhi TK, Puopolo AL, Yoon C, Thomas EJ, Griffey R, Brennan TA, Studdert DM. Missed and Delayed Diagnosis in the Emergency Department: A Study of Closed Malpractice Claims From 4 Liability Insurers. *Ann Emerg Med* 2007;49:196-205

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42. Trautlein JJ, Lambert RL, Miller J. Malpractice in the Emergency Department – Review of 200 Cases. *Ann Emerg Med* 1984;13:709-11
43. Humphreys T, Shofer F, Jacobson S et al. Preformatted charts improve documentation in the emergency department. *Ann Emerg Med* 1992; 21:534-40
44. O'Connor A, Finnel L, Reid J. Do pre-formatted charts improve documentation in the emergency department. *Ann Emerg Med* 1999;33:500-9
45. Yu KT, Green RA. Critical Aspects of Emergency Department Documentation and Communication. *Emerg Med Clin N Am.* 2009;27:641-54
46. The Legal Advisor, Massachusetts Medical Society. September 2010; XIX
47. Horowitz LI, Schuur, JD, et al. Dropping the baton: a qualitative analysis of failures during transition from the emergency department to inpatient care. *Ann Emerg Med.* 2007;53(6):701-10
48. Olshaker JS. Managing Emergency Department Overcrowding. *Emerg Med Clin N Am.* 2009;27:641-54
49. Emergency Department Crowding: High Impact Solutions. ACEP Task Force Report on Boarding. April 2008
50. Moore GP. Liability of Emergency Physicians for Studies Ordered in the Emergency Department: Court Cases and Legal Defenses. *J Emerg Med.* 2011 Feb;40(2):225-8
51. Greenes DS, Fleisher GR, Kohane I. Potential impact of a computerized system to report late-arriving laboratory results in the emergency department. *Pediatr Emerg Care.* 2000 Oct;16(5):313-15
52. Moore GP. Liability of emergency physicians for studies ordered in the emergency department: court cases and legal defenses. *J Emerg Med* 2009: Nov 17 [Epub ahead of print]
53. Espinosa JA, Nolan TW. Reducing errors made by emergency physicians in interpreting radiographs: longitudinal study. *BJM* 2000;320:737-40
54. Devitt PJ, Devitt AC, and Dewan MD. An Examination of Whether Discharging Patients Against Medical Advice Protects Physicians from Malpractice Charges. *Psychiatric Services.* 2000;51:899-902.