PSNet
PATIENT SAFETY NETWORK

Risk Management and Patient Safety

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Perspective

In 1990, a Harvard-based research team reported the incidence of medical errors in the state of New York, based on the hospital discharge analysis of 30,121 cases.(1) While this comprehensive study provided key data about the problem of medical mistakes, it was not until 1999, when the Institute of Medicine highlighted the New York state data (including the iconic 44,000–98,000 deaths per year estimate) in its seminal report, *To Err Is Human* (2), that the issue of medical mistakes became a national concern. Many organizations, including the National Patient Safety Foundation, the Leapfrog Group, and the Institute for Healthcare Improvement, were formed with the goal of reducing medical error and improving patient safety. In addition, the Federal government and a number of private foundations joined in this effort by increasing funding for research aimed at reducing medical errors and improving safety.

Less often discussed, some of the most successful patient safety initiatives have come from the risk management activities of professional liability insurance companies.(3) Professional liability insurers have long recognized the value of controlling systems risks as a means to reduce medical errors, improve patient safety, and limit malpractice exposure.

The Risk Management Foundation of the Harvard Medical Institutions has been a pioneer in this activity. Since its creation in 1976, Risk Management Foundation (RMF) has created a robust program of risk management activities, including dissemination of focused educational programs, case studies, simulation-based training programs, best practices, and published studies. The importance of claims analysis in driving these activities cannot be overemphasized: RMF analyzes and codes claims that come through its own insurance program (which insures 23 hospitals and 12,000 physicians) as well as claims contributed by many other health care organizations. This coding and analysis allows RMF to identify patterns of errors and of systems failures (e.g., lack of clear lines of communication and responsibility; lack of a robust process to prevent wrong site surgery); such patterns become targets for improvement efforts.

It is worth considering why medical malpractice claims can be such a rich and unique source of insights about patient safety. A malpractice claim file contains medical documentation, depositions from patients

and providers, and expert reviews from across the whole system. The reviews from experts speak to whether or not the provider met the standard of care and, more important, why the care did or did not met that standard. In this way, such claims differ from other sources of patient safety data in that the information that they provide is both broader and deeper. Malpractice claims move beyond the boundaries that limit the scope of most patient safety data to allow an understanding of the care given to patients across a system. While many hospitals understand what happens within their own walls, it is often impossible to grasp the course of patients as their care touches physicians' offices, free-standing laboratories, and other medical institutions. No such restrictions limit the view of what malpractice claims analysis offers. Further, the information available is deep—providing a close look at the experience of both the patients and providers of care through testimony and depositions.

RMF uses this data to initiate efforts to improve patient safety and decrease malpractice risk both within a particular specialty and across organizations. For example, in the mid-1980s, RMF asked the anesthesia chairs of the major teaching hospitals affiliated with Harvard Medical School to review their claims and consider what might be done to improve anesthesia safety. As a direct result of this claim study, the committee developed standards for pulse oximetry monitoring, protocols for intraoperative staffing, and other safety reforms.(4,5) Several years later, simulation-based training programs were developed in anesthesia and obstetrics based on clinical events drawn from serious malpractice cases.(6,7) Both specialties have experienced substantial drops in claims following these efforts.

Other examples of the benefits of systems-driven analysis informed by claims analysis are seen in three different initiatives. First, in the mid-1990s, RMF's loss prevention staff saw an alarming trend in malpractice cases related to breast cancer. The immediate response was to convene clinical leaders and to review the claims and data with them. The group created a breast care algorithm and educational programs to support it.(8) We have subsequently seen a significant reduction in breast cancer claims that we believe is due in part to these efforts.

More recent evidence comes from the Malpractice Insurers Medical Error Prevention Study, a large study of closed malpractice claims in 2001–2006, which identified and analyzed patterns of risk factors in several key areas including diagnostic failures (9), surgery (10), and emergency medicine.(11) These studies have made a positive contribution to the patient safety movement by demonstrating the central role that communication plays in error.

Finally, surgical error also lends itself to a multi-pronged approach.(12) Technical errors and communication breakdowns are the most common contributing factors seen in the claims analyses and in separate studies.(10,13,14) As a result, RMF has put in place interventions in the operating room that address team communication and skills assessment.(15) Armed with the claims data and supporting literature, RMF convened the Harvard surgical chiefs to develop evidence-based approaches to reduce postoperative injury to surgical patients. The chiefs began this work by developing a set of potentially risky clinical events, or "triggers" (Table). The optimal management of these events was felt to require communication between resident physicians and their attendings. A study of the triggers was then undertaken at the four largest academic teaching hospitals. The study showed that 33% of the time attendings were not notified after "trigger" events.(16) A list of 13 triggers that should lead to

communication between residents and attendings were constructed and subsequently implemented. A postintervention study has shown promising results.(17)

An obvious tension exists between the sometimes-secretive exchanges of information that can surround the litigation of a malpractice claim and the openness that is demanded in order to fully address patient safety issues. To address that issue, claims analysis can be performed on many levels. For both open [active] and closed claims, the data are carefully deidentified and primarily examined in the aggregate. This ensures that provider, and often even institutional, identities are shielded. In our experience, such identifying information contributes little to our efforts to improve systems of care.

In summary, medical malpractice insurance companies are uniquely positioned to analyze and trend large data sets to drive improvements in patient safety and decrease system risk. We recommend that organizations use the lessons from malpractice claims to improve systems of care. The relationship between risk management and patient safety continues to evolve. Better collaboration and efforts to improve safety, quality, and risk will lead to safer patient care. In the end, safer systems make patient care safer, which benefits patients, providers, and insurers.

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Table

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Table. Expected communication practices for patients admitted to surgical services. (Go to table citation in the text)

1. For all critical changes in a patient's condition, the attending will be notified promptly (generally within 1 hour following evaluation). These include:

- Admission to the hospital
- Transfer to the intensive care unit (ICU)
- Unplanned intubation or ventilatory support
- Cardiac arrest
- Hemodynamic instability (including arrhythmias)
- Code
- Development of significant neurological changes (suspected cerebrovascular accident/seizure/new onset paralysis)
- Development of major wound complications (dehiscence, evisceration)
- Medication or treatment errors requiring clinical intervention (invasive procedure(s), increased monitoring, new medications except Narcan)
- First blood transfusion without prior attending knowledge or instruction (before or after operation)
- Development of any clinical problem requiring an invasive procedure or operation for treatment

2. The following will be discussed with and approved by the attending before they occur:

- Discharge from the hospital or from the Emergency Department
- Transfer out of ICU

3. The attending should also be contacted if:

- Any trainee feels that a situation is more complicated than he or she can manage
- Nursing or physician staff, or the patient request that the attending surgeon be contacted