

When Lightning Strikes

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The annual probability of being struck by lightning in the United States is estimated to be about 1 in 280,000, with about 90% surviving the strike.¹ According to an analysis from the Netherlands,² the annual probability of a family physician receiving a complaint from that country's disciplinary tribunal is about 1 in 960,000.

Given the low probabilities of serious avoidable medical harms, it may be tempting to ask, "Why bother to study them?" Although playing such probabilistic games may be entertaining, there is a more important message behind the lightning strike analogy: no one wants to get struck by lightning, whether it is frequent or not or whether the damage is serious or trivial. A better understanding of why, when, and how medical errors occur can help us design better approaches to avoid and manage them. The study by Gaal and colleagues is another step in this important effort.

Since 1928, disciplinary tribunals in the Netherlands have reviewed complaints from patients or relatives. The tribunals are comprised of 2 lawyers and 3 physicians from the same discipline as the doctor under scrutiny. Findings of the tribunals are published without identifying the complainant or doctor. The study by Gaal and colleagues included 250 tribunal decisions involving family doctors during a 2-year period. Each decision was reviewed by 2 experienced family physicians. One-half of the complaints were filed by patients, almost one-half were filed by relatives, and just a few complaints were submitted by the

health care inspectorate. What are the lessons to be learned from this Dutch study that might improve the quality of care provided by all family doctors?

About one-third (74 of 250) of the complaints reflected a serious adverse health outcome, with nearly one-half resulting from a wrong diagnosis and one-quarter from inadequate care. The most common (missed or delayed) diagnoses involved myocardial infarction, stroke, or cancer. The tribunals judged that one-half (37) of the cases with serious health outcomes could have been avoided. Physicians were disciplined in 88 cases, got a warning in 69 cases, a reprimand in 11, and temporary suspension from practice in 2. The allegations resulting in the highest rates of discipline were inappropriate patient contacts (100%), violation of privacy (64%), and an incorrect statement of facts (53%). The authors conclude that reports of the Dutch disciplinary tribunals can be a useful source of information to improve patient safety.

WEATHER UNIQUE TO THE NETHERLANDS

The authors describe the disciplinary tribunals in the Netherlands as "an uncommon system." Yet the system shares a number of attributes with medical councils in the British medical diaspora and state medical boards in the United States.³ These councils and boards receive complaints from patients and relatives, do not usually involve the courts or financial compensation, and may impose a range of sanctions. One key difference is that state medical boards get a substantial number of complaints against doctors from other health professionals. Another difference is that a higher proportion of complaints in the United States involve allegations of substance abuse, inappropriate patient contacts, and fraud.⁴ Finally, decisions by American medical boards are posted on state government Web sites and are not kept confidential, as in the Netherlands. Moreover, US consumers tend to be less deferential to expert authority, insisting on their day in court judged by their peers, not the doctor's peers.

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Health care systems—much as legal systems, politics, or the weather—are local and reflect unique histories, cultures, and circumstances that cannot easily be transported to other places.⁵

At the same time, this study confirms what we know from other sources—serious adverse outcomes that are due to negligence or safety failures in family medicine are low-frequency but high-severity events for patients.⁶ Similarly, the rates of complaints, disciplinary actions, or malpractice judgments against family doctors are low. The 250 complaints against family doctors during the 2 study years represent approximately 120 million patient contacts, which translates to about 1 complaint per 960,000 contacts per year.

Of course, the odds and hazards of being involved in a complaint vary depending on one's perspective. For the patient, the 250 complaints reflect about 10 million patients, or 1 complaint per 40,000 patients in 2 years, which is a probability of 1 complaint per 80,000 patients per year. For the 10,000 or so Dutch family doctors, the risk of being named in a complaint is about 1 in 40 over the 2 years, or a risk of about 1 in 80 per year. Optimists might point out the likelihood of complaints involving serious adverse outcomes that were believed to be avoidable is even lower—34 such complaints over 2 years involving 120 million patient contacts (1 in 6.4 million per year), 10 million patients (1 in 540,000 per year), and 10,000 family doctors (1 in 540 per year).

LIGHTNING PROTECTION

For patients, a loss of trust in their doctors or the health care system has its own long-term harms. For doctors, the specter of public reproach or practice sanctions can shatter confidence and destroy careers. In other words, just as most survive a lightning strike, most survive medical negligence or a lapse in patient safety. Yet, some patients will have a loss of life, and some doctors will have loss of license or reputation. Others will have less-serious injuries that might have been avoided with relatively simple measures. Nearly as important as actual losses are the undetected or unreported errors that could have been prevented, but did not cause harm, were not recognized as errors, or were not reported. These errors represent lost chances for improvement. Children learn at a young age that lightning can be dangerous and is best avoided. Even the fool on the hill understands the importance of seeking shelter rather than standing tall while pointing a metal rod at a stormy sky.

When it comes to actions by disciplinary bodies, such as state medical boards, inappropriate patient contact, substance abuse, and making false statements

in the record bring a high risk of sanction. When it comes to medical care by family doctors, the most common allegations involve failure to diagnose common conditions, such as breast cancer or myocardial infarction.⁷ These risks can be better managed by adopting a reflective style of practice that seeks out opportunities to improve, using a systems approach that reduces the risk of error, remaining mindful that dissatisfied or harmed patients (and their relatives) merit extra attention, and being prepared to seek forgiveness when appropriate.⁸

At the level of the individual doctor or patient, this study does not provide very precise guidance on how to avoid lightning. The Dutch health care and legal systems are too different, the disciplinary tribunals are too limited in their impact on the practice environment, and the relevant and specific factors in each bad outcome are not shared in a way that prevents future harms from similar errors. What the study does do, however, is once again cast a harsh light on the unpleasant reality that lightning does exist, that strikes are not completely random, and that there are things that can be done to prevent death or serious injury. When lightning strikes once, it is said to be random. When the same hill is struck repetitively, there is something to be learned. These patterns of grievous harm from avoidable error come up time and again from one source after another (eg, disciplinary tribunals, malpractice courts, patient complaints, audit data). These recurring examples need to be taken seriously, with factors analyses performed, workflow and care pathways revised, and monitoring systems implemented.

Industrial engineers challenge health care to provide zero defect care. This ambitious goal frustrates clinicians, especially in primary care, who often feel overwhelmed by the incredible complexity to master, incessant demands to be addressed, never-ending tasks to be done, and inadequate resources to do better. Yet, we can do better. Focusing on a particular hazard and developing strategies to improve safety can yield astounding results. For example, a recent study of 112 Michigan hospitals for a 2-year period showed a reduction in ventilator-associated pneumonia from 5.5 cases per 1,000 ventilator days (a low-frequency, high-severity event) to 0—you read that correctly, 0—when 5 evidence-based recommendations were implemented.⁹ As we climb the mountain to higher-quality care, the biggest error that we can make is not the failure to prevent every lightning strike—that is not possible given today's limited knowledge and resources. Rather, our gravest error is to forever hide under the rocks, too frightened or overwhelmed by the noise and the thunder to see that the lightning is showing us the way to the summit.

