Bystander Boards
Health Care's Achilles’ Heel

A Report on the December 10, 2018, All-Boards Retreat of the Jewish Healthcare Foundation
BYSTANDER BOARDS: HEALTH CARE’S ACHILLES’ HEEL

Each year in the U.S., between 250,000 to 440,000 people die due to preventable medical error. Despite these appalling statistics, the fight against deadly medical errors represents two decades of mild skirmishes. Why has there has been no war?

An estimated 40% of U.S. healthcare spending is wasted on unnecessary treatments and preventable complications, inefficiencies, and errors — spending that isn’t available for high-value care, that potentially harms patients, and that constrains economic growth. Why hasn’t strong, widespread, and steady commitment to employing basic safety science principles effective in other industries yet to take hold in health care?

The scant outrage in the face of these preventable deaths remains a mystery. The media have done their part to alert the public: A steady stream of front-page stories on wrong-site surgeries, preventable deaths, provider misconduct, and rampant conflicts of interest make it clear that the public — including healthcare board members — are aware of the problems. Perhaps the public is sanguine, believing “this won’t happen to me.”

Twenty years on, we know beyond doubt that no one and no family, no matter how powerful, knowledgeable, or wealthy, can avoid the potential dangers of our current healthcare system. Among those who’ve died from preventable medical error are some of the healthiest, most vigorous, and best-connected community leaders. The dead include children, teens, and young adults — some even with physicians as parents whose expertise and urgent requests for attention, nevertheless, ended in anguish. Age is not a determinant. Expertise isn’t protective.

The urgency to save lives remains as strong as it was in 1998, when the Jewish Healthcare Foundation (JHF) launched the Pittsburgh Regional Health Initiative (PRHI). Our outrage is as raw as it was in 1999, when “To Err Is Human” shocked the nation by detailing the extent of preventable deaths in health care.

Fueled by our outrage, for the past 20 years we have shown what needs to be done: the adoption of safety procedures and systems that succeed in other high-risk industries, together with sustained commitment to continuous improvement. There have been areas of improvement, yet nothing close to what is possible or necessary.

We’ve learned that just as sustainable change starts at the top, barriers to change start there too. Beyond even the CEO and other C-Suite leadership, Boards of Directors are ultimately responsible for the actions — and inactions — of the institution they serve. Captains of industry would never tolerate the chaos and unreliability characteristic of healthcare delivery. Yet, in a mysterious paradox, these corporate leaders often do not demand the same performance excellence when they serve on hospital and health system boards.

Governing boards occupy the highest level of institutional accountability for the safety of patients in their health systems. Too often, boards respond weakly or provide cover for egregious safety records, sentinel events, “rogue” physicians, or attempts to bury errors (rather than solve them). They accept excuses for their institutions’ poor safety record, or ignore the data, and fail to set, enforce, reward, or punish ambitious annual safety targets. They do not embrace their ethical duty to prevent harm to human life.

In short, too many trustees behave as passive bystanders, guilty of averting their gaze.

On December 10, 2018, board members of the Jewish Healthcare Foundation and its two operating arms (PRHI and Health Careers Futures) gathered for an all-boards retreat to examine the phenomenon of
“bystander boards.” Such boards are marked by conformity, denial, apathy, or passivity, even when witnessing dangerous, life-threatening conditions.

Holocaust Center of Pittsburgh Director Lauren Apter Baimsfather gave the day historical grounding in her opening remarks — and pointed a way forward. In October 2018, she brought to Pittsburgh Ervin Staub, a Holocaust survivor and scholar, to speak about preventing the bystander behavior that leads to catastrophe. Dr. Staub pointed out that when outwardly good people tolerate intolerable behavior, speaking up and taking action can counter the group dynamics that reward silence.

Building on these insights, our interactive all-boards retreat explored the legal, ethical, and financial dangers to patient safety that can come from bystander healthcare boards. Importantly, however, it also drew insights from participants about how to encourage healthcare trustees to also serve as activists in the interest of safety.

The Board Members worked together in three exercises:

- **The Situation Room:** What if major healthcare stakeholders had reacted in crisis mode to the groundbreaking 1999 “To Err Is Human” report on medical error?

- **Bystander Behavior:** What are the psychological underpinnings of silence — the roots of “bystanding” — in the face of obvious malfunctions?

- **The New Compact in Action:** Could we use case studies and model board compacts to understand how boards can save lives moving forward?

What follows is a narrative summary of the December event that makes the *Case for Board Activism* by providing numerous recommended courses of corrective action. And, in the spirit of activism that undergirds this effort, we conclude with a “roadmap” for action on the part of the Jewish Healthcare Foundation and its operating arms.

**THE CASE FOR BOARD ACTIVISM**

Truly impressive reform requires truly committed leadership. Such leadership can come from CEOs and top administrators of health systems and hospitals, as well as purchasers, educators, regulators, insurers, and consumer/patient advocates. But at the highest level of both legal and ethical accountability is the governing board — its members and especially the board chair.

What leaders need to do isn’t mysterious. Basic safety science techniques, particularly when combined with basic quality engineering techniques, have proven effective. Paul O’Neill, as CEO of Alcoa, employed them decades ago in the high-risk industrial business of making aluminum — and created the safest corporation in the world. That’s why we recruited him to form PRHI, which improved safety in Pittsburgh-area hospitals and catalyzed similar programs across the nation.

And yet, for so many reasons, the zeal of reformers is hard to maintain.

First, while healthcare systems, as institutions, want to assert that they are already as safe as can be, these goals compete for attention in a medical world convulsing with reforms — from the Affordable Care Act to the digital health revolution and beyond. Safety programs with proven improvement records can get sidelined, especially with staff turnover at the top.
Then, there is little help from outside accreditors. The nation’s chief hospital accreditation body, the Joint Commission, has failed in its mandate to be a reliable guarantor of patient safety. A recent Harvard study, reported in the British Medical Journal, bemoaned the “lack of meaningful difference in outcomes” between Joint Commission-accredited hospitals and those inspected by state agencies. It is reasonable to ask whether the accreditation industry gives lip service to good governance but engages board members only marginally in powerful oversight.

The CMS (Centers for Medicare & Medicaid Services) penalties and incentives in patient safety also haven’t done the job. The penalties don’t exceed the costs of training staff in quality improvement techniques and promoting culture and behavioral change. And commercial insurance rewards are not motivating better care.

The Institute for Healthcare Improvement (IHI) has been addressing the role of boards in patient safety. Its recent report provides a Governance of Quality Assessment roadmap, which is an excellent framework. But unless used with rigor, it becomes a check-the-box list that can be honored in the minimum and be effective in the minimal. It has yet to guarantee widespread vigorous board system oversight of safety.

State hospital organizations are as ineffectual as the major accrediting organization in bringing about meaningful progress in harm reduction. While a few state hospital associations have a real commitment to safety, far too many have primarily informational programs that don’t change institutional behavior. Worse, they may boast about their safety improvement mission while working behind the scenes to pass legislation that works against strong enforcement or oversight. Their executives are rewarded for such actions.

The disappointment extends even to paragons of patient safety like the Johns Hopkins Hospital. According to a recent investigation by the *Tampa Bay Times*, the hospital was found to be ignoring the very safety principles it has championed: Frontline workers submitted reports of preventable errors and unsafe practices, only to be ignored by high-ranking executives. All that glitters isn’t gold.

It’s unclear how many more hundreds of thousands of preventable deaths, how many more scandals, how much additional credible data we need, as a nation, to go into a crisis mode. We’ve concluded that without the full commitment of healthcare leaders — and especially of trustees — to safety, an unconscionably high number of patients will continue to be harmed by our healthcare system. The mission of our December retreat was therefore to seek credible ideas about how to spur renewed commitment among board members to address the national epidemic of medical error.

Our Trustees are an ideal group with whom to have an in-depth conversation about board accountability. They include business leaders, doctors and nurses, lawyers and accountants, pharmacists, psychologists, academics, and legislators. Most serve on other boards, including those of hospitals or healthcare systems. Every person who participated holds a position of responsibility. They may guide their organizations’ purchase of health care or know influential C-Suite members who do. They contributed clear thinking to possible solutions.
Below are worthy ideas generated by Board Members and staff at the retreat.

**HOW WOULD REAL LEADERSHIP REDUCE MEDICAL ERROR**

The board chair has an obligation to initiate accountability for patient safety and patient care, ensuring the highest standards of clinical practice and medical error removal. That’s the legal and ultimate governance pinnacle. The chair oversees and guarantees the structure and processes that ensure accountability.

Ideally, the chair ensures that ambitious safety targets are in place and monitored accurately, credibly, and transparently. The chair guarantees integrity and removes excuses, and resists “erasure” of errors through upcoding and other gimmicks.

The quality and outcomes of care are part of determining promotions, compensation, and employment itself. A reward system throughout the organization (including the C-Suite) would result in incentive payments for exceeding ambitious safety targets.

Boards should include people who have expertise and commitment to safety, quality, and integrity, including experts in medical ethics, internal audits, safety science, and corporate risk management. Their expertise should be called upon at every board meeting. Board meetings with an outsized ratio of staff to directors constrain open discussion and “ownership.”

As with any board, members must disclose all conflicts of interest. The stakes in health care, however, are higher. It’s not just the sums of money involved, or the potential for self-dealing, from real estate development to supply-chain purchasing decisions. Gaming a healthcare system can affect the overall health of a community and result in bodily harm to patients.

Overall, the board chair ensures that all members can raise objections without fear of reprisal or being shunned. Psychologists recognize the human instinct to fit into a group; being accepted in a tribe has been a key to survival since the dawn of man. But a healthcare system board cannot consist of passive bystanders who go along to get along. In some organizations, one brave person can change the dynamic by speaking up. A healthcare system board cannot rely on an exceptional individual. In a tone of mutual respect, hard questions should be aired and examined. The current interpretation of “Duty of Loyalty” should be revisited. Loyalty to whom? To patients, the public, or the C-Suite?

**Effective Board Structures**

Every board would benefit from a committee focused on safety, so that safety is not buried in broader quality committees and other venues. A Safety Committee ensures that organizational training in safety science techniques is thorough, and that a root-cause analysis is performed routinely to understand the reasons for both common and exceptional internal errors. A Safety Committee also monitors “sentinel events” — what hospitals call fatal or grave errors — in other hospitals and health systems, to ensure that similar mistakes aren’t repeated in their organization.

The Safety Committee guarantees the transparency of both the process for and the outcome of such reviews. It can require regular reports to the overall governing board, and also require additional training and education for teams and supervisors where errors occur. The Safety Committee defines and approves benchmarks for measuring safety, including an annual safety self-assessment processes at every level of the organization. This could be done confidentially and privately so as not to endanger anyone’s position.
But the fact that there is such a high priority process — and that it’s never finished business — can be shared with both staff and the public.

Executive sessions of the board — in which just members and the chair meet without management or staff — are essential. They become a standard part of every board meeting, not an option. Such sessions are the best time to re-review the safety report delivered by the CEO.

**Better Board Process**

Activist boards engage local and national thought leaders and national advocacy groups dedicated to patient safety to monitor and help shape the work of the Safety Committee and the processes of the C-Suite and governing board. These experts would also approve the data used for benchmarking and assessing progress toward annual and quarterly safety goals. In addition, an annual and formal assessment of the overall organizational process for ensuring patient safety is essential for maintaining organizational focus.

Board and committee members may need appropriate prompts to speak up, question, and challenge progress on safety and the response to various “hotspots.” This engagement and empowerment can be baked into board orientations. Scenarios of past critical incidents (internal and external) and models of the appropriate “Situation Room” response going forward can also be integral to board orientations.

Further, rigid agendas for board meetings in general, with strict adherence to timelines, do not encourage open conversation. While time is the most valuable commodity, it should be used by board members with laser-like efficiency to get answers to troubling questions. An arbitrary agenda timeline allows top management to brush off concerns too easily.

Putting mutual responsibilities on paper leaves an important trail of ethical expectations and obligations. A formal board compact can outline mutual expectations and commitments. The Seattle health system of Virginia Mason offers a good example:
Dr. Gary S. Kaplan, the CEO of Virginia Mason and a national leader in patient safety, is resolute on the role of boards. Each regular meeting features a patient describing his or her hospital experience — and by mandate, half of them tell negative stories. “We have no business talking about quality if we cannot keep our patients safe,” Dr. Kaplan has written. “Board discussions about safety and quality are every bit as important as conversations about finances.”
Ongoing Board Training and Education

Not every trustee arrives with requisite healthcare safety experience or knowledge. Board members require training and instruction in accountability oversight, governance, safety science, and quality engineering principles. This can be done through a series of speakers, informal dinner conversations and other events, until they become habitual. Organizations like the Advisory Board and the ECRI Institute can offer ideas and present real-life challenges for board members to solve.

Board members do not have the mandate to manage hospital staff. Yet it’s important for them to visit the frontlines of care, observe care delivery, and communicate with frontline workers — on their own and without C-Suite oversight. Employee morale and empowerment to promote safety, as well as confidence that all workers are equipped to perform their best, are board governance responsibilities. Right now, they are seldom within its purview.

Solutions for Patient Safety, a national network of more than 135 children's hospitals, pays attention to board education. They hold semi-annual, one-day sessions for board members from dozens of hospitals and demonstrate, for example, how central line infections happen and how they can be prevented.

At Main Line Health (MLH) in Philadelphia, board members on the Quality and Patient Safety Committee attend interactive sessions on error prevention tools and “Walk the Talk” safety fairs. Every MLH Board Member attends a Safety Committee meeting annually.

In addition to showing patient safety techniques in a medical setting, instructors could take board members to factories that are models of safety and lean principles — the places that have inspired the leaders of healthcare safety.

The 12-hospital Memorial Hermann Health System in Houston has taken leadership-driven change to perhaps a new level. Responding to a series of adverse events, in 2006 the Board and C-Suite elected to make patient safety its only core value and initiated High Reliability: Journey from Board to Bedside Initiative. As part of the initiative, Board members attend safety and quality conferences and take courses on improving patient safety measures. In addition, all employees and new hires receive training in high reliability work practices. They learn to use techniques that are standard practice for employees in high reliability industries (e.g., nuclear power and air travel safety), such as safety checklists. The system rewards success with a public award to hospitals that go at least one year without harming a patient. Today, the system’s hospitals consistently receive top ratings.

Board members would benefit from a basic understanding of the metrics used to measure real progress on ambitious safety targets. They need to be able to detect the equivalent of creative accounting. In one session of the retreat, we imagined a trustee troubled by a case of recoding/upcoding. In the simulation, the CEO explained recoding diagnoses as an accepted method of maximizing reimbursement in a complex billing system. However, such recoding can also disguise medical errors by reclassifying its billing status.

Board members educated enough to know what to look for will be able to question a practice or decision. They need to know when they are getting weak excuses from the CEO for bad outcomes. (“We don’t have a high infection rate; we just have too many false positives” is one. “We don’t have time for all that quality improvement; we are too busy taking care of patients” and “Many errors aren’t harmful” are others. There are plenty more — see Appendix A.) And they can confidently request, via the board chair, that the organization’s counsel render an opinion.
Over decades, PRHI has trained tens of thousands of frontline staff and graduate students in the health professions in patient safety. They have become good soldiers. But sustained change doesn’t happen without the total commitment of the C-Suite, the managerial and supervisory leaders, and importantly, the governing board. Frontline workers absorb the values of leaders; just one incidence of brushing off patient safety for financial expedience creates cynicism. Research supports our experience: Atul Gawande and others have shown that hospitals whose boards devote attention to quality — effectively using clinical quality metrics and spending time on quality, for example — provided higher quality care.

SPREADING ACCOUNTABILITY: OUR POST-RETREAT ROADMAP

JHF Board Chair David Ehrenwerth, a lawyer with extensive experience in nonprofit board governance, opened the retreat with an anecdote that spoke volumes. An acquaintance who had been appointed to a healthcare system board called to share the good news. Mr. Ehrenwerth congratulated him — and asked if he realized what the position entailed. The caller, alas, focused on the community prestige he would enjoy, and the chance for better business contacts. Mr. Ehrenwerth informed him that serving on a hospital or healthcare system board brings with it profound responsibilities. Being a steward of the institution’s fiscal health is only the beginning. You are, he admonished, also charged with the moral obligation to ensure that people can get the best — and safest — health care possible.

Few effective mechanisms currently exist to hold healthcare boards accountable (except in the very rare case that a board member gets sued for not following their fiduciary duties). Technically, the communities they serve can hold the boards of these community institutions accountable; in reality, this rarely if ever happens. Clearly, with few exceptions, bystander boards are unlikely to disappear on their own.

Going forward, together with our supporting organizations, the Jewish Healthcare Foundation will mark the 20th anniversary of the publication of “Too Err Is Human” with a multi-faceted campaign to engage a broad array of stakeholders, including governing boards, in reducing deaths from preventable medical error. This can and should drive the development, implementation, and enforcement of new policies, practices, informational campaigns, toolkits, and training materials. (See Appendix B: Estimates of Medical Errors and Deaths in U.S. Hospitals)

At the national level, we will work to:

- Raise awareness of the importance of external and internal accountability for safety among all public, private and non-profit stakeholders. We will elevate the issue at national speaking engagements/meetings with obvious partners such as the American Public Health Association, Grantmakers In Health, National Board of Medical Examiners, American Association of Medical Colleges, Network for Excellence in Health Innovation, Network for Regional Healthcare Improvement and AcademyHealth. In addition:
  - Building on the momentum from the December retreat, we’ve been encouraged to make patient safety a central topic at the Snowbird Health Summit in February 2019, which attracts prominent healthcare executives and pivotal shapers of policy. JHF President and CEO Karen Wolk Feinstein, PhD, will be leading a roundtable exchange and follow-up session entitled: 20 Years Post ‘To Err is Human’: How Will We Make Progress? The goal is that these discussions will lead to formal commitments and an action plan.
In May, at the influential Princeton Conference (organized by Brandeis University’s Council on Health Care Economics and Policy), Dr. Feinstein will be chairing a panel that takes the topic to another level: Is It Time for States to Aggressively Regulate Patient Safety?

In Fall 2019, marking the 20th anniversary of the publication of “To Err is Human,” JHF will work with national partners to convene a national summit of organizations who can collaborate in a widespread campaign for error reduction. In keeping with the crisis in preventable healthcare deaths, we will include but look beyond governance to include all interventions and policies that reduce harm.

- The event will feature best practices/leadership initiatives and establish a powerful, policy-focused agenda representing patient and community voices.

- The summit will also provide a platform for engaging consumer groups, such as the Consumers Union, Community Catalyst, Families USA, and Business Groups on Health to enlist the broader public in understanding what it would take to save lives. Hopefully, this will include a renewed and widespread commitment to educate and engage legislators about the need to regulate and/or create standards of training, certification, and oversight for safety assurance.

- Open discussions with the Pacific Business Group on Health about expanding the scope of the Employers’ Centers of Excellence Network (ECEN) own accreditation standards to assure executive and healthcare system boards leadership in safety. ECEN providers are selected by participating employers based on their demonstrated commitment to safety, best practice, and value. ECENs demonstrate the performance excellence that rigorous accreditation with consequences can achieve.

- Use existing networks of partners to educate and engage legislators and advocate on behalf of:
  - The need to regulate and/or create standards of training, certification and oversight for healthcare board governance.
  - The importance of having better data on the extent to which medical errors lead to patient deaths. In particular, advocate for changes to the Centers for Disease Control and Prevention vital statistics reporting requirements so that physicians have to report on whether an error led to a death.

- Create marketing messages and engage national media in promoting stories that highlight the need for and progress toward protocols for good governance in health care.

At the state level we will work to:

- Unite members of the Pennsylvania Health Funders Collaborative, the PA Department of Health (the state body charged with hospital licensure and regulation), and interested state legislators to consider more aggressive policies to regulate or create state-level certification for patient safety. (Perhaps we use the Sarbanes-Oxley Act — a federal law instituting public company accounting reform — to serve as a model of effective regulation protecting the public.)
• Convene a statewide summit (following the national summit) to develop a Pennsylvania campaign and a potent patient-safety action agenda.

At the local level, we will work to:

• Continue to promote patient safety internally through the work of PRHI and its own Patient Safety and Salk Fellowships.

• Engage JHF’s Health Activist Network (HAN) to support the initiatives described here. Together with other local consumer groups (e.g., the Consumer Health Coalition and the Pennsylvania Health Access Network), HAN will launch an advocacy campaign, challenging governing boards, specialist societies, professional associations, and public health organizations to accept accountability for patient safety in healthcare institutions.

Among the participants at the retreat was Gerard Magill, PhD, Professor at Duquesne University’s Center for Healthcare Ethics, whose work focuses on governance ethics. Addressing the distinct mission of healthcare boards, he noted that ethics must be at the heart of healthcare delivery, adding that it is “who we are, how we function, and what we do — our identity, accountability, and quality. If we don’t follow these principles,” he concluded, “we can lose our organizational soul, as well as our personal souls.”

Acknowledgements

Our December 2018 All-Boards Retreat required open minds and dedicated problem-solvers. We are grateful to our Board Members for their willingness to engage a difficult problem and their willingness to consider new solutions. They have been worthy partners in advancing a non-negotiable JHF mission: stopping the needless deaths of so many Americans from preventable errors in the healthcare system.

We thank our partners who spoke and helped to lead the sessions: In addition to Dr. Magill and Dr. Bairowsfather, we were joined by Dr. Jonathan Weinkle of the Squirrel Hill Health Center; Dr. Marnin Fischbach, a psychiatrist; and Ken Segel, a former PRHI director who is co-founder of Value Capture. Two JHF Trustees also led sessions: Dr. Brad Stein of RAND Corp. and attorney James Lieber, author of “Killer Care: How Medical Error Became America’s Third-Largest Cause of Death and What Can Be Done About It.”

We also thank Michael Eisenberg, director of “To Err Is Human,” the new documentary about medical error that advances the work of his late father, Dr. John Eisenberg.
Appendix A: Karen’s Top 20 Excuses

to explain away high medical error rates and resulting mortalities

1. Safety isn’t a problem in itself. It’s embedded in other challenges such as reliability, systems thinking, quality of care. We’d have to fix everything.
2. We don’t have time for all that quality improvement; we are too busy taking care of patients. We can’t stop the line.
3. We don’t have a high infection rate. We just have too many false positives.
4. Our patients are sicker. You can’t compare us to other hospitals.
5. People aren’t really dying from medical error but from pre-existing conditions. We rely on recoding/upcoding to fix that (and avoid penalties).
6. Only the frailest die. The healthiest recover.
7. To err is human. Humans will always goof up. Errors are just inevitable.
8. People aren’t cars or aluminum; they are unpredictable organisms. So, basic quality engineering and safety science techniques won’t work in medical environments.
9. If purchasers and the public don’t care, what’s the ROI? Why should we invest in safety?
10. Media exaggerate the dramatic events.
11. The numbers are staggering—in the hundreds of thousands. We can’t feel compassion for so many faceless, tearless, unidentified victims.
12. RNs are getting “fast-food degrees.” We can’t function in an environment where our nurses aren’t prepared to care safely.
13. Our hospital keeps cutting costs and shedding clinical staff.
14. We can’t get the data to measure errors and we can’t pinpoint where errors really occur or who’s responsible. So how can we fix them?
15. Our risk adjustment methodologies are weak and they favor the small community hospitals.
16. The data on med error are faulty. If no one can agree on how many fatal and preventable errors there are, maybe there really aren’t so many.
17. Many errors aren’t harmful.
18. Health care is just so complex. Who are researchers, advocates and other laymen to question physicians?
19. I’m afraid to speak up. There is no reward for a whistleblower.
20. The U.S. has the best health system in the world!
## Appendix B: Estimates of Medical Errors and Deaths in U.S. Hospitals

<table>
<thead>
<tr>
<th>Source</th>
<th>Estimate of Preventable Deaths</th>
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<tbody>
<tr>
<td><strong>Jeffrey Brady</strong>, AHRQ Dir, Ctr for QI &amp; Patient Safety 2018</td>
<td>Brady, representing AHRQ, speaking at the Health Affairs conference on Patient Safety noted that 12 million patients affected by diagnostic errors annually, with 4 million suffering serious harm. Year of data unknown.</td>
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<tr>
<td><strong>Linda Aiken</strong> Health Affairs 2018</td>
<td>Survey of 53,699 nurses in 535 hospitals find that 30% of nurses give their hospitals a safety grade of C, D or F. Data from 2005-2016</td>
</tr>
<tr>
<td><strong>BMJ</strong> 2016</td>
<td>Based on examination of 4 studies, the Johns Hopkins researchers found that 10% of all U.S. deaths are estimated to be from medical errors, or 251,454 deaths every year, making errors the 3rd leading cause of death in the U.S., more than respiratory disease, accidents, stroke and Alzheimer’s. Data from 2000-2008.</td>
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<tr>
<td><strong>Anesthesiology</strong> 2016</td>
<td>Researchers observing 277 operations over 8 months at Mass General Hospital found that in 45% of these surgeries there was at least one medication error and/or an adverse drug event, about 80% of which were preventable. More than 1/3 of these errors resulted in observed patient harm (but not deaths). Data from 2003-2014.</td>
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<tr>
<td><strong>CDC</strong> published in <em>NEJM</em> 2014</td>
<td>Surveys were conducted in 183 hospitals. Of 11,282 patients, 452 (or 4%) had 1 or more healthcare-associated infections, leading to an estimate of 648,000 patients with healthcare-associated infections in U.S. acute care hospitals. Data from 2011.</td>
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<tr>
<td><strong>J of Patient Safety</strong> 2013</td>
<td>Updated the IOM estimate reviewing four studies using the Global Trigger Tool and found that between 210,000 and 400,000 patients annually experience preventable harm that contributes to their death. Data from 2008-2011.</td>
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<tr>
<td><strong>AHRQ</strong> 2013</td>
<td>AHRQ found a rate of 121 hospital-acquired conditions per 1,000 discharges. About 10 percent of hospitalized patients experienced one or more HACs, for a total of 3,957,200. Data from 2013.</td>
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<tr>
<td><strong>HHS</strong> Office of the Inspector General, 2010</td>
<td>A 2010 survey found that 27% of Medicare inpatients experienced injuries associated with their care. For half, this resulted in a prolonged hospital stay, permanent harm, a life-sustaining intervention, or death. 44% were considered preventable. Data from 2008.</td>
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<tr>
<td><strong>IOM</strong> To Err is Human. 2000</td>
<td>Between 44,000 and 98,000 preventable deaths and 1 million excess injuries each year in U.S. hospitals. Data from 1984.</td>
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