Patient Safety Surveillance and Improvement Program (PSSIP)

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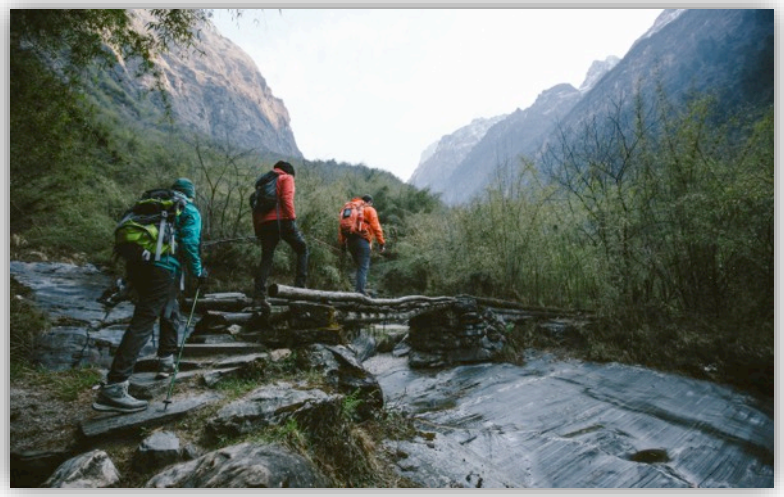
Patient Safety Surveillance & Improvement Manager

October 29, 2020

MISSION & VISION

The Utah Department of Health's mission is to protect the public's health through preventing avoidable illness, injury, disability, and premature death; assuring access to affordable, quality health care; and promoting healthy lifestyles.



Our vision is for Utah to be a place where *all* people can enjoy the best health possible, where *all* can live and thrive in healthy and safe communities.

STRATEGIC PRIORITIES

Healthiest People – The people of Utah will be among the healthiest in the country.

Optimize Medicaid – Utah Medicaid will be a respected innovator in employing health care delivery and payment reforms that improve the health of Medicaid members and keep expenditure growth at a sustainable level.

A Great Organization – The UDOH will be recognized as a leader in government and public health for its excellent performance. The organization will continue to grow its ability to attract, retain, and value the best professionals and public servants.

ABOUT THE OFFICE OF HEALTH CARE STATISTICS

Office of Health Care Statistics oversight includes:

- **Collect:** We collect and produce data that are relevant and useful to our stakeholders
- **Analyze:** We create valuable enhancements to our data resources and our systems have the analytic capacity to transform them into useful information
- **Disseminate:** We make the data and information we collect and produce available to the *right people* at the *right time* for the *right purposes*

ABOUT THE OFFICE OF HEALTH CARE STATISTICS

Responsible for the following data series:

- **Healthcare Facilities Data:** Includes all institutional "patient encounters" that are provided in the State of Utah by qualifying licensed facilities

- **Surveys of Customer Satisfaction with Health Plans (CAHPS):** Health plans (commercial and Medicaid, medical and dental) conduct annual surveys of their members (Required by statute - implemented by rule)

- **Self-reported Quality Metrics for Health Plans (HEDIS):** Quality of care measures - Healthcare Effectiveness Data and Information Set (HEDIS), which is developed and maintained by the National Committee for Quality Assurance (NCQA).

- **All Payer Claims Database**: Includes claims paid on behalf of Utah residents for the majority of health plans, Medicaid, Medicare Advantage, and third party administrators including PBMs.

- **Patient Safety Surveillance and Improvement Program (PSSIP):** A reporting mechanism which captures patient safety events (injuries, death or other adverse events) associated with healthcare delivery and administration of anesthesia, which fosters conversations on how to minimize adverse patient safety events in Utah.

UTAH ADMINISTRATIVE CODE

The rules that apply are:

- R380-200. Patient Safety Surveillance and Improvement Program (PSSIP).
- R380-210. Health Care Facility Patient Safety Program.
- R434-150. Adverse Events from the Administration of Sedation or Anesthesia; Recording and Reporting.

TODAY'S GUEST SPEAKER

Patient Safety MOVEMENT

Donna Prosser, DNP, RN, NE-BC, FACHE, BCPA
Chief Clinical Officer of the Patient Safety Movement Foundation

Creating a Foundation for Safe and Reliable Care

Utah Department of Health
October 29, 2020

Donna M. Prosser, DNP, RN, NE-BC, FACHE, BCPA
Chief Clinical Officer
Patient Safety Movement Foundation

Patient Safety MOVEMENT

Learning Objectives

- Evaluate the past 20 years of global healthcare safety improvement efforts
- Analyze the typical patient safety gaps in most healthcare organizations
- Summarize the actionable solutions that healthcare organizations can implement to create a foundation for safety and reliability, including:
  - A person-centered culture of safety
  - A holistic, continuous improvement framework
  - An effective model for sustainment

Patient Safety MOVEMENT

The Problem

Hundreds of thousands of people die and **millions** are harmed every year due to **preventable** medical error.

REVIEW ARTICLE

A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care

John T. James, PhD

the bmj

BMJ 2016;353:i2139 doi: 10.1136/bmj.i2139 (Published 3 May 2016) Page 1 of 5

ANALYSIS

Medical error—the third leading cause of death in the US

Medical error is not included on death certificates or in rankings of cause of death. **Martin Makary** and **Michael Daniel** assess its contribution to mortality and call for better reporting

Martin A Makary *professor*, Michael Daniel *research fellow*

Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, MD 21287, USA

The annual list of the most common causes of death in the United States, compiled by the Centers for Disease Control and Prevention (CDC), informs public awareness and national research priorities each year. The list is created using death certificates filled out by physicians, funeral directors, medical examiners, and coroners. However, a major limitation of the death certificate is that it relies on assigning an International Classification of Disease (ICD) code to the cause of death.[1] As a result, causes of death not associated with an ICD code, such as human and system factors, are not captured. The science of safety has matured to describe how communication breakdowns, diagnostic errors, poor judgment, and inadequate skill can directly result in patient harm and death. We analyzed the scientific literature on medical error to identify its contribution to US deaths in relation to causes listed by the CDC.[2]

Death from medical care itself

Medical error has been defined as an unintended act (either of omission or commission) or one that does not achieve its intended outcome,[3] the failure of a planned action to be completed as intended (an error of execution), the use of a wrong plan to achieve an aim (an error of planning),[4] or a deviation from the process of care that may or may not cause harm to the patient.[5] Patient harm from medical error can occur at the individual or system level. The taxonomy of errors is expanding to better categorize preventable factors and events.[5] We focus on preventable lethal events to highlight the scale of potential for improvement.

The role of error can be complex. While many errors are non-consequential, an error can end the life of someone with a long life expectancy or accelerate an imminent death. The case in the box shows how error can contribute to death. Moving away from a requirement that only reasons for death with an ICD code can be used on death certificates could better inform healthcare research and awareness priorities.

How big is the problem?

The most commonly cited estimate of annual deaths from medical error in the US—a 1999 Institute of Medicine (IOM) report[6]—is limited and outdated. The report describes an incidence of 44 000-98 000 deaths annually.[7] This conclusion was not based on primary research conducted by the institute but on the 1984 Harvard Medical Practice Study and the 1992 Utah and Colorado Study.[1,3] But as early as 1993, Leape, a chief investigator in the 1984 Harvard study, published an article arguing that the study's estimate was too low, contending that 78% rather than 51% of the 180 000 iatrogenic deaths were preventable (some argue that all iatrogenic deaths are preventable).[1,8] This higher incidence (about 140 400 deaths due to error) has been supported by subsequent studies which suggest that the 1999 IOM report underestimates the magnitude of the problem. A 2004 report of inpatient deaths associated with the Agency for Healthcare Quality and Research Patient Safety Indicators in the Medicare population estimated that 575 000 deaths were caused by medical error between 2000 and 2002, which is about 195 000 deaths a year (table 1).[9] Similarly, the US Department of Health and Human Services Office of the Inspector General examining the health records of hospital inpatients in 2008, reported 180 000 deaths due to medical error a year among Medicare beneficiaries alone.[10] Using similar methods, Classen et al described a rate of 1.13%.[11] If this rate is applied to all registered US hospital admissions in 2013[12] it translates to over 400 000 deaths a year, more than four times the IOM estimate.

Similarly, Landrigan et al reported that 0.6% of hospital admissions in a group of North Carolina hospitals over six years (2002-07) resulted in lethal adverse events and conservatively estimated that 63% were due to medical errors.[13] Extrapolated nationally, this would translate into 134 581 inpatient deaths a year from poor inpatient care. Of note, none of the studies captured deaths outside inpatient care—those resulting from errors in care at home or in nursing homes and in outpatient care such as ambulatory surgery centers.

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the national level. The amount of new knowledge generated each year by clinical research that applies directly to patient care can easily overwhelm the individual physician trying to optimize the care of his patients.[1] Furthermore, the lack of a well-integrated and comprehensive continuing education system in the health professions is a major contributing factor to knowledge and performance deficiencies at the individual and system level.[2] Guidelines for physicians to optimize patient care are quickly out of date and can be biased by those who write the guidelines.[3–5] At the system level, hospitals struggle with staffing issues, making suitable technology available for patient care, and executing effective handoffs between shifts and also between inpatient and outpatient care.[6] Increased production demands in cost-driven institutions may increase the risk of preventable adverse events (PAEs). The United States trails behind other developed nations in implementing electronic medical records for its citizens.[7] Hence, the information a physician needs to optimize care of a patient is often unavailable.

At the national level, our country is distinguished for its patchwork of medical care subsystems that can require patients to bounce around in a complex maze of providers as they seek effective and affordable care. Because of increased production demands, providers may be expected to give care in suboptimal working conditions, with decreased staff, and a shortage of physicians, which leads to fatigue and burnout. It should be no surprise that PAEs that harm patients are frighteningly common in this highly technical, rapidly changing, and poorly integrated industry. The picture is further complicated by a lack of transparency and limited accountability for errors that harm patients.[8,9]

There are at least 3 time-based categories of PAEs recognized in patients that are or have been hospitalized. The broadest definition encompasses all unexpected and harmful experience that a patient encounters as a result of being in the care of a medical professional or system because high quality, evidence-based medical care was not delivered during hospitalization. The harmful outcomes may be realized immediately, delayed for days or months, or even delayed many years. An example of immediate harm is excess bleeding because of an overdose of an anticoagulant drug such as that which occurred to the twins born to Dennis Quaid and his wife.[10] An example of harm that is not apparent for weeks or months is infection with Hepatitis C virus as a result of contaminated chemotherapy equipment.[11] Harm that occurs years later is exemplified by a nearly lethal pneumococcal infection in a patient that had had a splenectomy many years ago, yet was never vaccinated against this infection risk as guidelines and prompts require.[12]

METHODS

The approach to the problem of identifying and enumerating PAEs was 4-fold: (1) distinguish types of PAEs that may occur in hospitals, (2) characterize preventability in the context of the Global Trigger Tool (GTT), (3) search contemporary medical literature for the prevalence and severity of PAEs that have been enumerated by credible investigators based on medical

men make mistakes, but a good man
ds when he knows his course is wrong,
nd repairs the evil. The only crime is
pride."— Sophocles, Antigone"

cal care in the United States is technically complex at individual provider level, at the system level, and at

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discloses no conflict of interest.
upport: none.
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1. James, J. T. (2013). A new, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety*, *9*(3), 122-128.
2. Makary, M.A., & Daniel, M. (2016). Medical error – the third leading cause of death in the U.S. *BMJ*, 353, i2139.

Patient Safety MOVEMENT

Estimated Economic Impact of Medical Errors

ERRORS & ADVERSE EVENTS

By John C. Goodman, Pamela Villarreal, and Biff Jones

The Social Cost Of Adverse Medical Events, And What We Can Do About It

ABSTRACT Adverse medical events—medical interventions that cause harm or injury to a patient separate from the underlying medical condition—are unfortunately an all-too-frequent occurrence in US hospitals. They may cause as many as 187,000 deaths in hospitals each year, and 6.1 million injuries, both in and out of hospitals. We estimate the annual social cost of these adverse medical events based on what people are willing to pay to avoid such risks in non–health care settings. That social cost ranges from $393 billion to $958 billion, amounts equivalent to 18 percent and 45 percent of total US health care spending in 2006. A possible solution: Patients offered voluntary, no-fault insurance prior to treatment or surgery would be compensated if they suffered an adverse event—regardless of the cause of their misfortune—and providers would have economic incentives to reduce the number of such events.

In this article we review the evidence about the extent of adverse medical events, and we make a rough estimate of their social cost. Adverse medical events (also known as iatrogenic events) are injuries and deaths that are caused by something other than the medical condition for which the patient is seeking care. They are typically divided into three categories, as follows: preventable and negligent; preventable but not negligent; and other adverse events.

Events in the first category, also called malpractice errors, are injuries or deaths resulting from medical misconduct or lack of adherence to basic minimum standards of care. Examples are performing surgery on the wrong site, or leaving a sponge in a patient after an operation. Events in the second category are considered avoidable, although they are not the result of negligence. Some hospital-acquired infections are examples of this sort of medical error. The third category is "other" events. These are events that we do not know how to prevent with our current knowledge and technology. There is no obvious way of avoiding them.

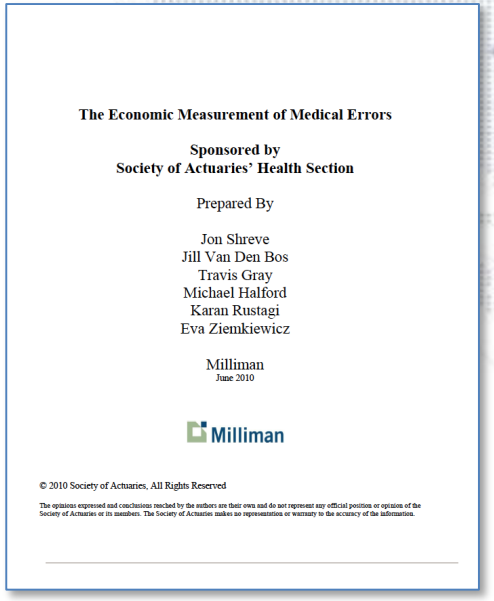
A patient's risk of dying in a US hospital from an adverse medical event is as high as 1 in 200.[1,2] This is much higher than, for example, the one-in-one-million risk that some federal regulatory agencies have considered minimally acceptable in other industries.[3] We found that the social cost of adverse medical events—that is, what Americans would be willing to pay to avoid injuries and deaths caused by such events—was also quite large. As we report below, it was several times larger than, for example, typical estimates of the cost of the medical malpractice system.

Estimating The Number Of Adverse Events

In 1991 a Harvard University study of New York hospital records from the 1980s found that adverse events occurred in 3.7 percent of hospitalizations.[1] As shown in Exhibit 1, more than half of these were considered preventable medical errors, and roughly half of those preventable errors involved negligence (malpractice). In another 1991 study, researchers examined hospital records from Utah and Colorado and found that

The total cost of adverse events is estimated to be between $393 billion and $958 billion annually in the U.S. alone.

Globally, it's estimated that 15% of hospital expenditures and activity in OECD countries can be attributed to treating safety failures.



The Economic Measurement of Medical Errors

Sponsored by
Society of Actuaries' Health Section

Prepared By

Jon Shreve
Jill Van Den Bos
Travis Gray
Michael Halford
Karan Rustagi
Eva Ziemkiewicz

Milliman
June 2010

Milliman

3. Panagioti, et al. (2019). Prevalence, severity, and nature of preventable patient harm across medical settings: systematic review and meta-analysis. *BMJ,* 366(l14185).
4. Goodman, J.C., Villarreal, P., and Jones, B. (2011). The Social Cost Of Adverse Medical Events, And What We Can Do About It *Health Affairs* 30, 4:590-595
5. Shreve, J., Van Den Bos, J., Gray, T., Halford, M., Rustagi, K., & Ziemkiewicz, E. (2010). The economic measurement of medical errors, *Society of Actuaries*.
6. Andel, C., Davidow, S. L., Hollander, M., & Moreno, D. A. (2012). The economics of health care quality and medical errors. *Journal of Health Care Finance*, 39(1), 39.

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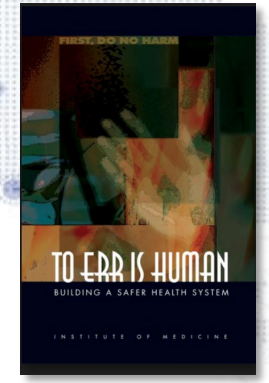
Institute of Medicine (IOM)

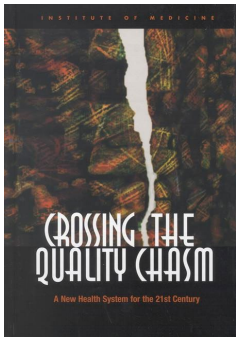
To Err is Human (1999)

- Nearly 100,000 patients die each year in U.S. hospitals from preventable medical error
- Focused only on errors of *commission* rather than omission, communication, or context



Crossing the Quality Chasm (2001)

- Established six aims for the 21st century
- Healthcare should be safe, effective, patient-centered, timely, efficient, and equitable



7. Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (2000). *To Err is Human: Building a Safer Health System.*
8. Institute of Medicine. (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: The National Academies Press.

Patient Safety MOVEMENT

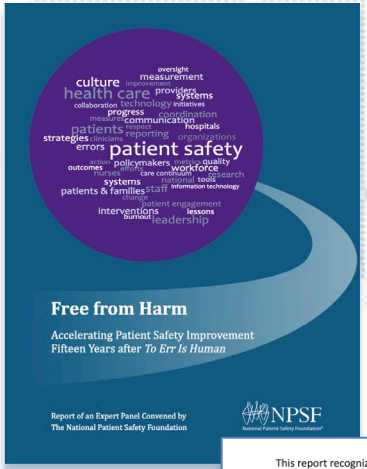
Two Decades of Change: Hard Won Improvement

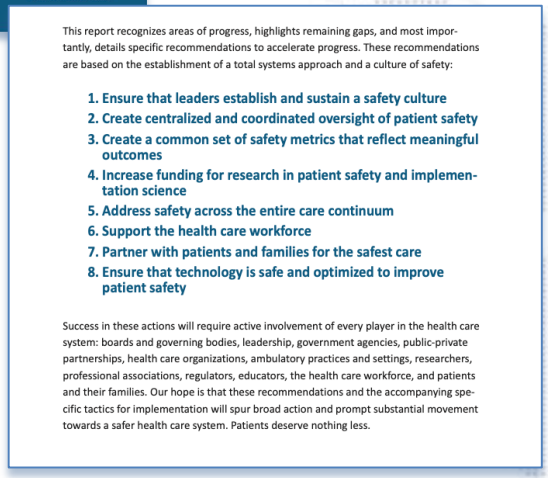
- A renewed focus on performance improvement in hospitals
- Institute for Healthcare Improvement (IHI): *100,000 Lives Campaign*, *5,000,000 Lives Campaign*
- Collaboratives and shared learning
- Publicly reported quality and safety outcomes
- Disease-Specific Certifications (DSC)
- Electronic Medical Record (EMR) implementation
- Patient satisfaction scores
- Legislation

Patient Safety MOVEMENT

Current State

- We have come very far in 20 years, but we still have a long way to go
- Millions continue to die or suffer harm every year
- The COVID-19 pandemic has highlighted the importance of focusing on safety for *everyone*

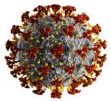




This report recognizes areas of progress, highlights remaining gaps, and most importantly, details specific recommendations to accelerate progress. These recommendations are based on the establishment of a total systems approach and a culture of safety:

1. Ensure that leaders establish and sustain a safety culture
2. Create centralized and coordinated oversight of patient safety
3. Create a common set of safety metrics that reflect meaningful outcomes
4. Increase funding for research in patient safety and implementation science
5. Address safety across the entire care continuum
6. Support the health care workforce
7. Partner with patients and families for the safest care
8. Ensure that technology is safe and optimized to improve patient safety

Success in these actions will require active involvement of every player in the health care system: boards and governing bodies, leadership, government agencies, public-private partnerships, health care organizations, ambulatory practices and settings, researchers, professional associations, regulators, educators, the health care workforce, and patients and their families. Our hope is that these recommendations and the accompanying specific tactics for implementation will spur broad action and prompt substantial movement towards a safer health care system. Patients deserve nothing less.



You can't have patient safety without health worker safety!

9. National Patient Safety Foundation (2015). *Free From Harm: Accelerating Patient Safety Improvement Fifteen Years Later After to Err is Human*

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Why Haven't We Fixed This Yet?

- Improvement has been implemented in silos; we have created a “patchwork quilt” of improvement
- We’ve focused on process change more than culture change
- We blame people for making mistakes, rather than identifying broken systems and processes
- The frontline is often afraid to speak up
- Care is generally clinician-centered, rather than patient-centered
- The care environment has become extremely complex
- Care coordination is lacking across the continuum
- Sustainability is much harder than anyone realized
- Most healthcare organizations are struggling financially
- Culture change is very hard and takes a long time

Patient Safety MOVEMENT

The Goal: High reliability is an expectation for *every* healthcare organization

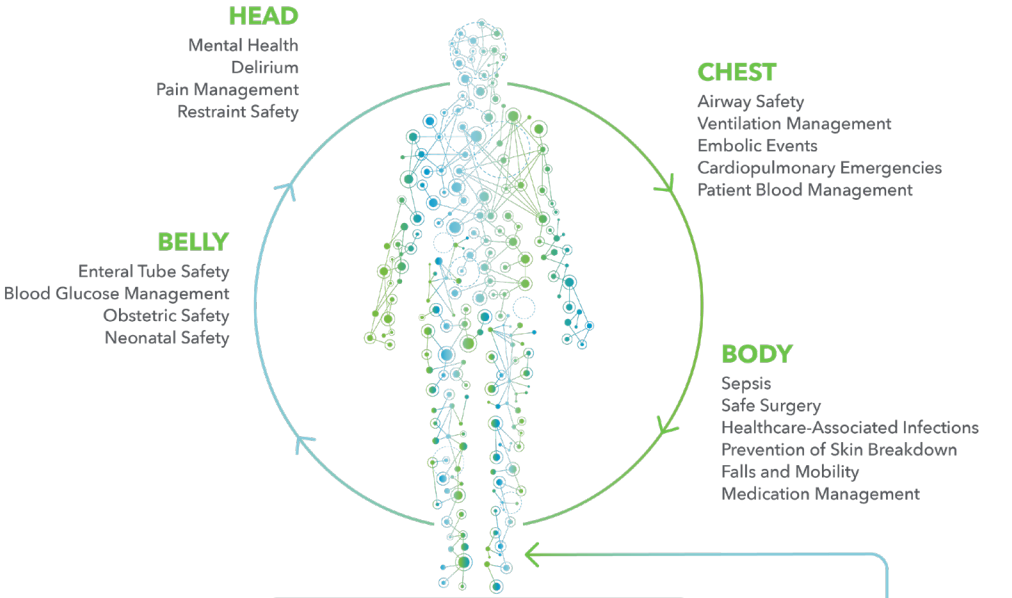
High Reliability Organizations (HROs)

A subset of hazardous organizations that have operated nearly error-free for very long periods of time.

- Karlene Roberts (1990)

Patient Safety MOVEMENT

Create the Foundation



Without a foundation for safe and reliable care...

1. A Person-Centered Culture of Safety
2. A Holistic, Continuous Improvement Framework
3. An Effective Model for Sustainment

... you will never be successful in sustaining population-specific improvement.

Patient Safety MOVEMENT

A Person-Centered Culture of Safety

- Ensure that the safety of every **person** is a priority for all
- Engage patients and families in improvement activities
- Create care systems that are patient-centered, well-coordinated, and individualized
- Hardwire transparency, respect, and trust throughout the organization
- Practice CANDOR when discussing errors with patients and families
- Adopt a Just Culture approach to determining root causes

The single greatest impediment to error prevention in the medical industry is that we punish people for making mistakes.

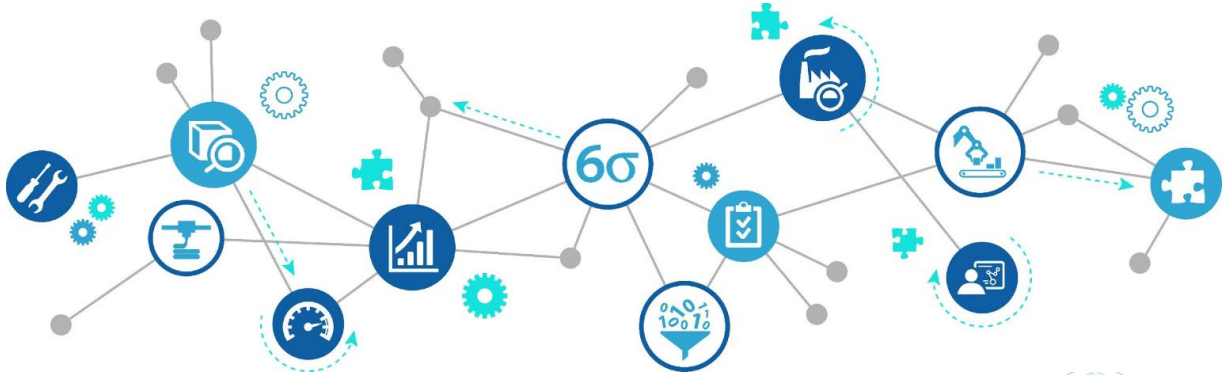
—Lucian Leape

10. Agency for Healthcare Research and Quality. (2017). *Communication and Optimal Resolution (CANDOR) Toolkit.* Retrieved from: https://www.ahrq.gov/patient-safety/capacity/candor/modules.html
11. NHS Improvement. (2018). *A Just Culture Guide*. Retrieved from: https://improvement.nhs.uk/resources/just-culture-guide/#h2-about-our-guide

Patient Safety MOVEMENT

A Holistic, Continuous Improvement Framework

- Develop a singular, consistent approach to improvement
  - PDSA, PDCA, DMAIC, etc.
- Ensure all improvement work is coordinated at a singular source, to ensure that resource allocation decisions are made efficiently
- Validate data integrity and maximize the use of technology



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A Holistic, Continuous Improvement Framework

- Make it easy for the frontline to know what to do
- Consider *The 6Ps of Clinical Practice* in all improvement work
  - Practice Guideline Summaries
  - Policies and Procedures
  - Protocols and Order Sets
  - Patient Education
  - Patient Care Documentation
  - Professional Development

Patient Safety MOVEMENT

An Effective Model for Sustainment

We cannot change the human condition, but we can change the conditions under which humans work.
– James Reason

- Integrate organizational education with improvement work
- Design creative, effective communication networks
- Develop leaders so they can effectively manage change and promote accountability
- Understand the impact of human factors on sustaining change

12. World Health Organization. (2009). *Human Factors in Patient Safety*. Retrieved from: https://www.who.int/patientsafety/research/methods_measures/human_factors/human_factors_review.pdf

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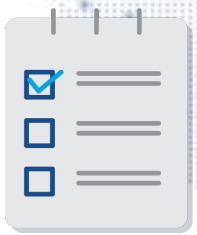
The Patient Safety Movement Foundation Network

Patient Safety MOVEMENT

How We Help Organizations Improve



APSS Blueprint

- Executive Summary
- Leadership Checklist
- Clinical Workflow
- Performance Improvement Plan
- What We Know
- Resources & Patient Education
- Technology & Measurement
- References & Appendix

APSS Educational Resources

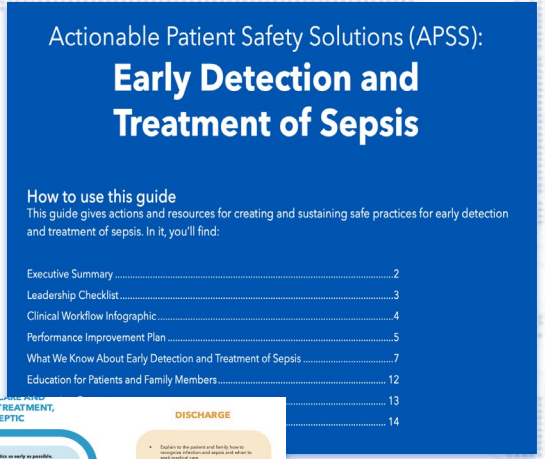
- Videos
- Webinars
- Blogs
- White papers
- Journal articles
- Presentations

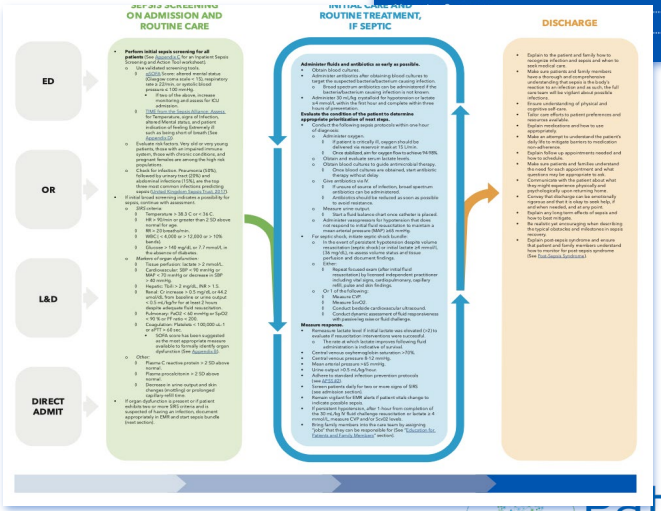
APSS Virtual Coaching

- Assessment
- Analysis
- Planning
- Prioritization
- Implementation
- Evaluation

Patient Safety MOVEMENT

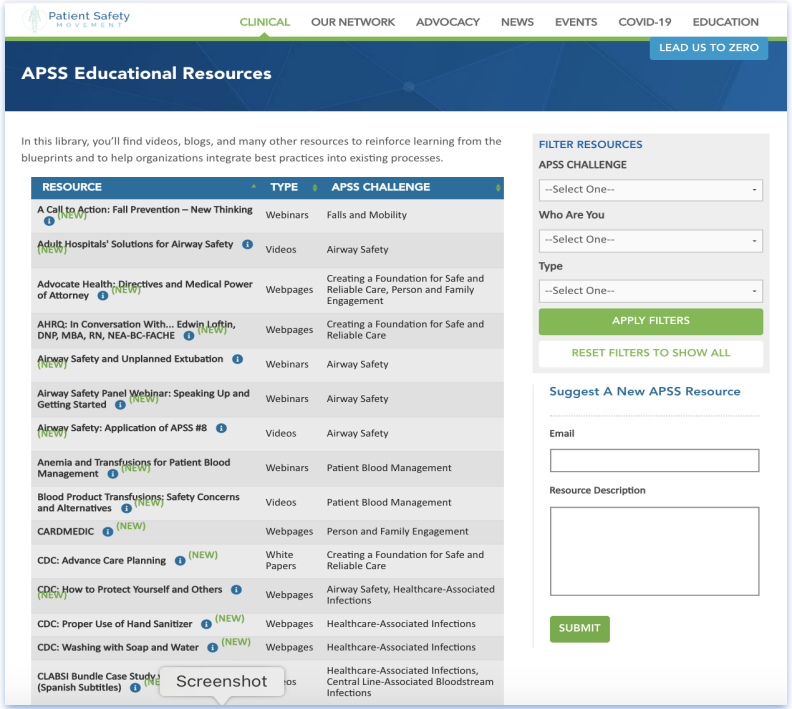
APSS Blueprints





APSS Education

- Webinars
- Videos
- Blogs
- Articles
- Publications



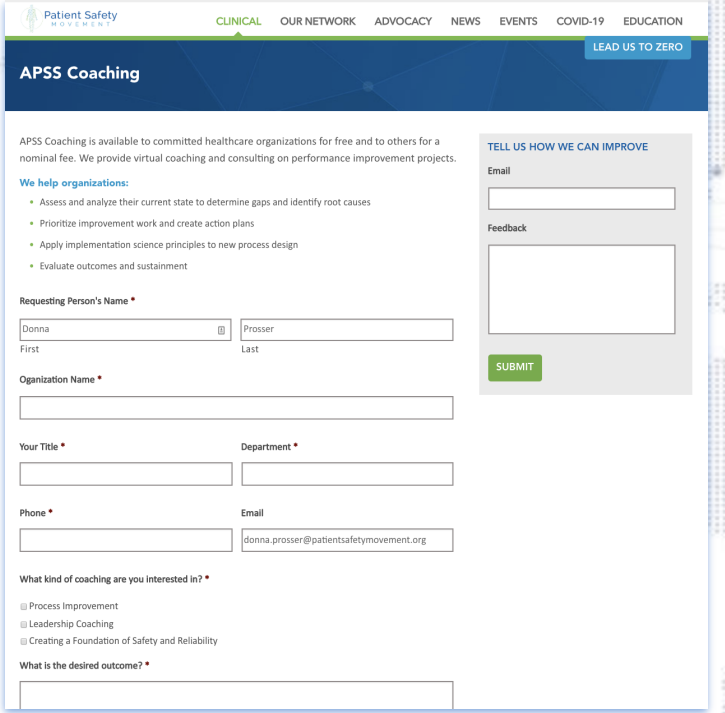
APSS Virtual Coaching

Continuous Improvement

- Assessment & Root Cause Analysis
- Prioritization & Planning
- Implementation & Evaluation

Project Plan dissemination on the **PSMF Shared Learning Network**

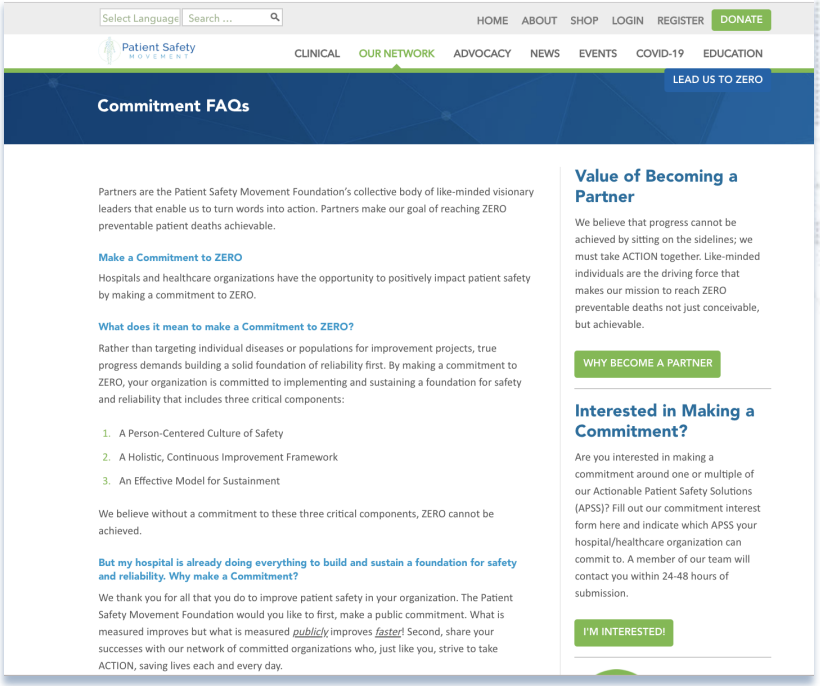
Students, interns, and fellowships



Patient Safety MOVEMENT

Make a Commitment to Zero Harm

- Make a commitment to establish a solid foundation for safe and reliable care
- Get **free** virtual coaching and consulting to help you succeed



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Thank You!

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Patient Safety
MOVEMENT