Patient Safety: The Past, the Present, and the Future

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Introduction

What put patient safety in the spotlight in recent years?

Several investigations and years of clinical research have proven that failure to follow patient safety best practices has led to increased length of hospital stays, permanent injury for patients, and even death. The complexity of the healthcare system has made it difficult for patients and providers to care for each and every patient as safely as possible. Even as technology continually forges with medicine and processes become streamlined, patients are still at a high risk of illness and injury.

Patients can be harmed by improper use of technology or by poor staff communication. A staff member might forget to tell the nightshift nurse about a patient's medication allergy, and the new nurse ends up giving medication that causes an adverse reaction. Or, an EHR might malfunction and not load patients' notes, causing a physician to guess the proper treatment method.

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The History of Patient Safety

First, let's start with a little history of patient safety. In the 1990s, the health care system came to a bleak realization. While they had tackled several medical advancements and seen great progress in medical processes, their patient safety levels were next to nothing, as several patients dealt with infections and injuries. The healthcare industry took notice and quickly began to implement changes in patient safety practices.

Fun Fact
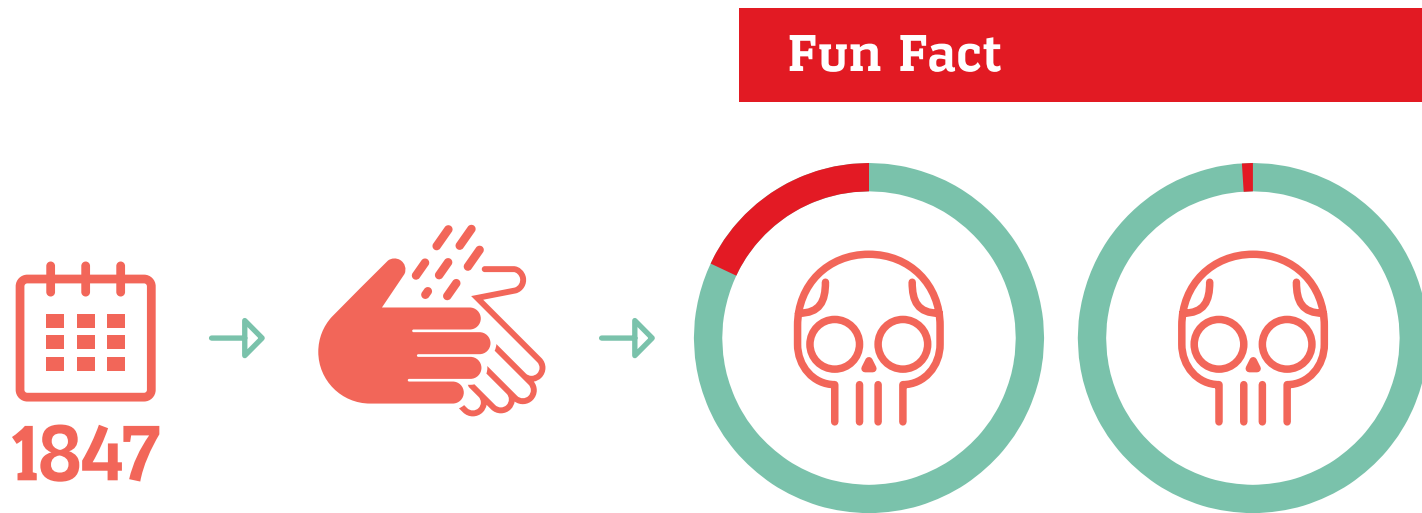
1847

The first act of patient safety was in 1847, when Ignaz Semmelweis suggested that physicians in obstetric clinics should clean their hands with chlorinated limes to remove cadaverous particles. After that, **mortality rates in the clinics dropped from 18 percent to 1 percent.**
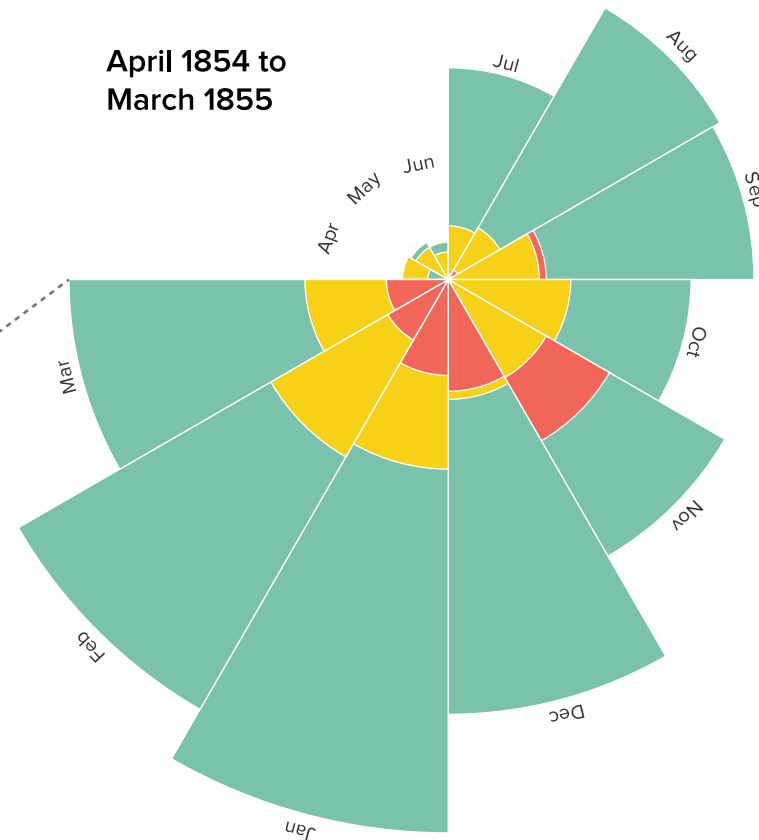
Did you know?

Florence Nightingale conducted a field study in 1855 investigating patient mortality that led to the "Nightingale Rose Diagram," which suggested that soldiers die more often from illness than injuries, and that illness could be lowered by improved patient treatment.

April 1855 to March 1856
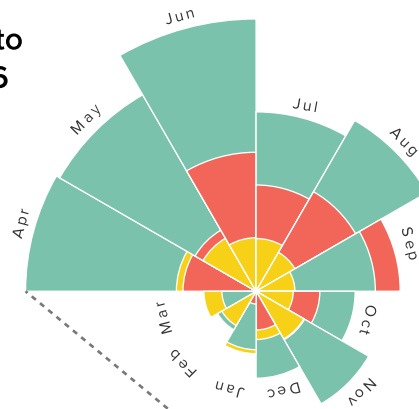
April 1854 to March 1855

Deaths from Preventible or Mitigable Zymotic Diseases

Deaths from wounds

Deaths from all other causes

While there were minor advancements in patient safety throughout the course of history, the term wasn't created until late in the 20th century. However, at this point it was very apparent that patient safety was lacking. **Between the 1960s and 1980s, many people began to inquire about the high rate of mortality in hospitals and medical facilities.** As a result, the Hospital Advisory Service was created.

Fun Fact

The Hospital Advisory Service was the first National Health Service Inspectorate.

After years of investigating these claims, the Clinical Negligence Scheme for Trusts was formed, and risk management standards were created to help reduce the high number of claims. In 1998, the publication "A First Class Service" was created. It introduced clinical governance to NHS, stating:
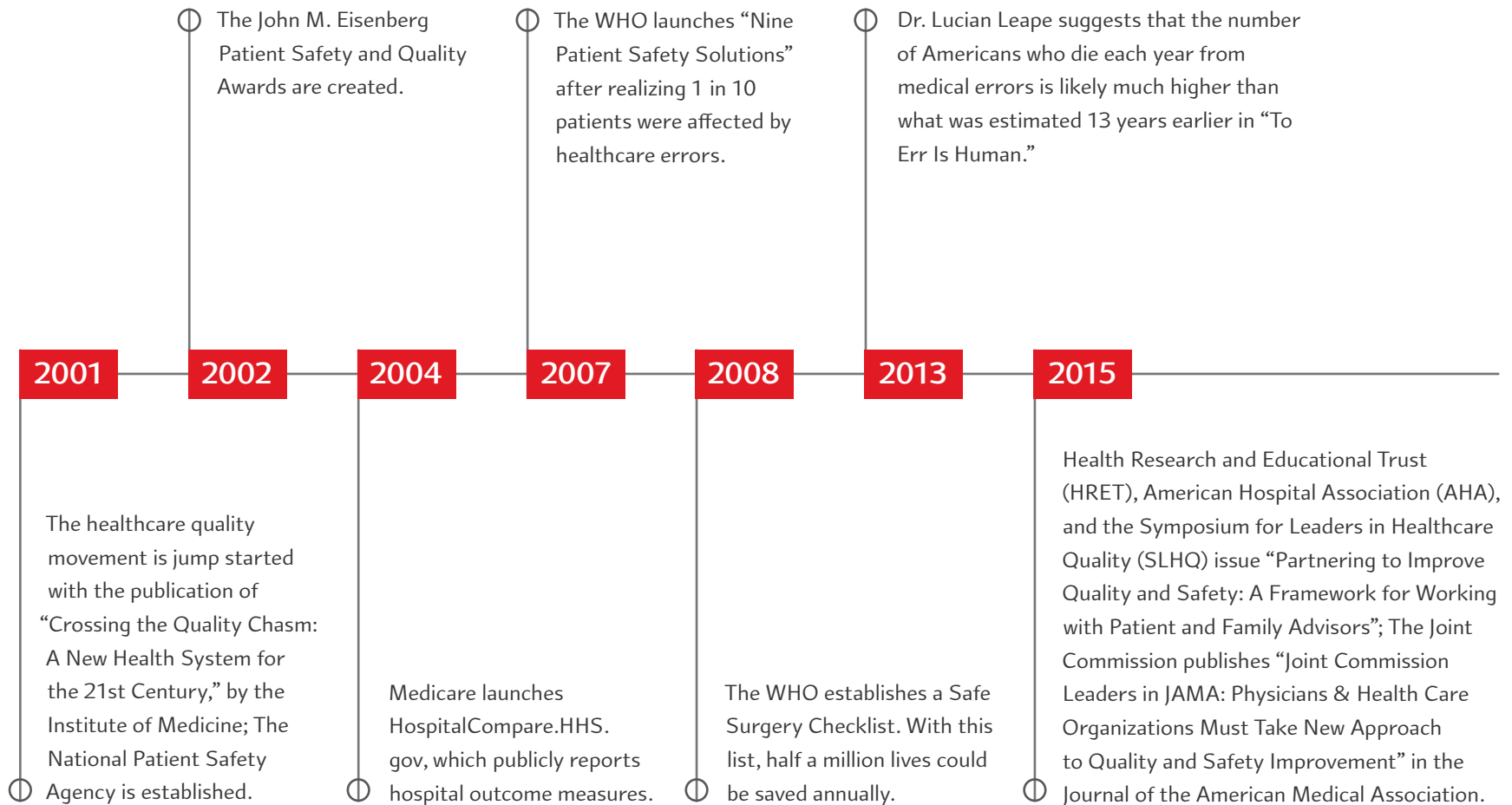
"Clinical governance can be defined as a framework through which NHS organizations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in critical care will flourish."

A year later, "To Err is Human: Building a Safer Health System" helped kickstart the national discussion on patient safety.

A summarized timeline of patient safety

Once the discussion got started, several developments emerged. Here are a few of them.

2001 | **2002** | **2004** | **2007** | **2008** | **2013** | **2015**

The John M. Eisenberg Patient Safety and Quality Awards are created.

The WHO launches "Nine Patient Safety Solutions" after realizing 1 in 10 patients were affected by healthcare errors.

Dr. Lucian Leape suggests that the number of Americans who die each year from medical errors is likely much higher than what was estimated 13 years earlier in "To Err Is Human."

The healthcare quality movement is jump started with the publication of "Crossing the Quality Chasm: A New Health System for the 21st Century," by the Institute of Medicine; The National Patient Safety Agency is established.

Medicare launches HospitalCompare.HHS.gov, which publicly reports hospital outcome measures.

The WHO establishes a Safe Surgery Checklist. With this list, half a million lives could be saved annually.

Health Research and Educational Trust (HRET), American Hospital Association (AHA), and the Symposium for Leaders in Healthcare Quality (SLHQ) issue "Partnering to Improve Quality and Safety: A Framework for Working with Patient and Family Advisors"; The Joint Commission publishes "Joint Commission Leaders in JAMA: Physicians & Health Care Organizations Must Take New Approach to Quality and Safety Improvement" in the Journal of the American Medical Association.

Redesigning systems

In the early stages of improving patient safety, many healthcare leaders simply believed it could be as easy as examining and redesigning the system. Their hypothesized redesign included:

Standardization

Simplification
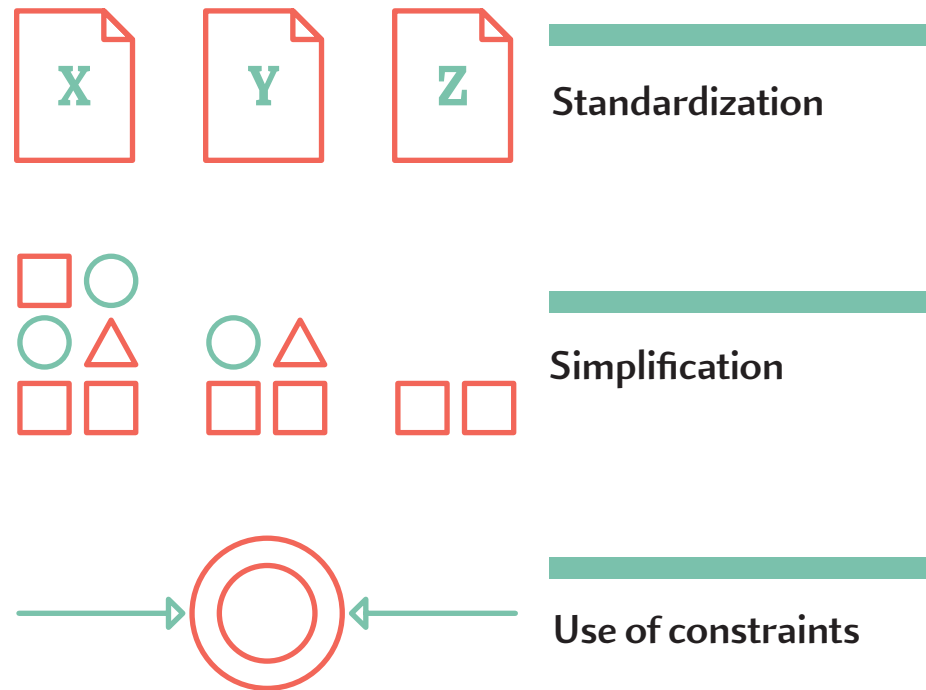
Use of constraints

Fun Fact

One type of constraint used was known as forcing function, which physicians believed made error impossible.

People also began to look at healthcare improvement with an engineering perspective. Some viable improvements included computerizing physician prescribing and streamlining intravenous pumps. Others included professional improvements, such as getting physicians to work in teams and support one another.

Medical staff began to realize that the more medical errors they shared, the better off the healthcare system would be. Physicians and nurses could learn from these mistakes, make conclusions, and educate others on what not to do.

A general conclusion

Overall, the healthcare industry came to a conclusion: To improve the current poor state of patient safety, a few things needed to be done nationwide, in every facility, big or small. They included:
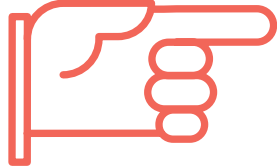
Avoiding sharp-end blame for mistakes and finger pointing
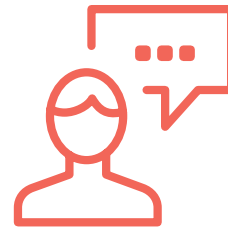
Sharing medical errors publicly to promote learning and the instilment of preventative measures
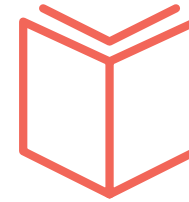
Training and supporting staff who are dealing with risky work

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Looking at the Present

Though advances have been made, the present state of health care still poses a lot of risks for patients. There are still errors made in the field and in surgeries, and there are still a high number of patients experiencing hospital-related infections because of staff errors.

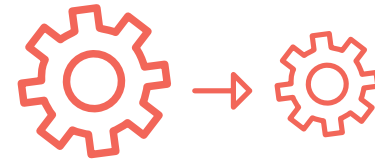## Why is patient safety still sub-par?

Patient safety still isn't where it should be for several reasons. These include:

A lack of medical resources in facilities in low-income areas

Poor staffing that leads to employee burnout and frustration

Employee disengagement

Understanding HAIs

One of the biggest threats to patient safety right now is HAIs, or healthcare-associated infections. Many times, a patient will go into a facility to be treated for a condition and will end up with a secondary infection caused by staff error. These infections can be caused by a wide range of common or strange bacteria, as well as viruses or fungi. Regardless of what causes the infection, the end result is often serious.

Did you know?

Approximately 1.7 million health care-associated infections occur each year and cause 99,000 deaths.

HAIs can seriously compromise patients' health, especially if their immune system is weak. HAIs can lead to:

Negative medical outcomes

High financial and legal costs if they involve a lawsuit

Serious emotional distress for the patient and his or her family, especially if the outcome is deadly

The 4 common HAIs

There are four HAIs that tend to plague medical facilities, even with today's modern medicine. They include:

1

Ventilator-associated pneumonia (VAP)

2

Surgical-site infection (SSI)

3

Catheter-associated urinary tract infection (CAUTI)

4

Central-line associated bloodstream infection (CLABSI)

Even the smallest error can lead to a terrible outcome. People might assume that HAIs are limited to large hospitals where patients are coming in and out every day. However, these infections can happen in any medical facility, from long-term care facilities to dialysis centers.

Pro Tip

Keep it clean. HAIs can be reduced by more than 50 percent if staff follows low-cost infection prevention and control measures, like washing their hands.

What's an example of an HAI?

A middle-aged man is battling leukemia and underwent chemotherapy in a hospital for several months. At one point, because of his weakened state, he was given a ventilator to help support his organs. A few days after his last session, he is finally told that his cancer is in remission and he is ready to go home. However, a day before he leaves, his lungs begin to fill up with fluid. The medical staff discovers he contracted pneumonia from the ventilator he was using during his stay. His immune system is incredibly weak and he is unable to fight the pneumonia, and he dies.

Why did this happen?

Ventilator-associated pneumonia is a very common HAI. However, like all HAIs, this man's death could have been prevented if the proper protocol was followed. Ventilator-associated pneumonia is caused when bacteria gets into the ventilating tubes that go through the nose or mouth. Once the bacteria are in the tubes, they can get into the lungs. If the person's immune system is weak or compromised, the lungs aren't able to fight off this bacteria and it can lead to a deadly case of pneumonia.

How could this problem have been solved?

Sadly, this man's outcome could have been very different. If the staff caring for the patient had diligently kept their hands clean when inserting, re-inserting and checking the ventilator, there would have been less potential for germs to have gotten into the machine. Alternatively, if the tube had been fully disinfected prior to patient use, germs would have been less likely to be carried into his lungs. Though these seem like such simple acts, overlooking these small details can sometimes mean the difference between life and death.

Overlooking errors

Though HAIs happen every day, even more errors are made that, luckily, don't cause negative outcomes.

Did you know?

There is a 1 in 1,000,000 chance of a passenger being injured in an aircraft. There is a 1 in 300 chance of a patient being harmed by health care.

While those odds already seem fairly high, they could be even higher. There are several mistakes made by medical staff members every day that go unnoticed. Often, the number of errors that are recognized depends on the hospital or medical facility where they take place. If a staff member makes a mistake at a highly renowned hospital such as the Cleveland Clinic, the mistake is likely to be recognized. However, if a staff member makes an error at a teaching hospital or a facility with scarce medical resources, the mistake is more likely to go unnoticed.

Fun Fact

28 percent of adverse events are caused by a health professional's negligence.

A lack of training

Some of these errors tend to go unnoticed due to a lack of training. If staff members are not equipped with the proper training, they don't know wrong actions from right. Or, if their supervisor wasn't trained, they might teach new staff members procedures incorrectly. From there, it becomes a chain reaction of erroneous events that largely compromises patients' safety. If staff members are only allowed to work in one area, they might only witness one type of mistake, preventing them from recognizing the wide variety of errors that can occur.

Therefore, training for all staff should comprise of:

**Lessons on system failures and errors in other industries**
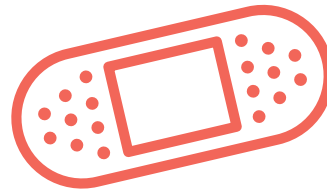
The subsequent harm that is caused by system malfunction and errors

The different type of system failures and the errors that come from it

The cost of errors

When health professionals overlook errors or choose not to properly train medical staff on system failures and errors, it can be costly for the hospital or medical facility.
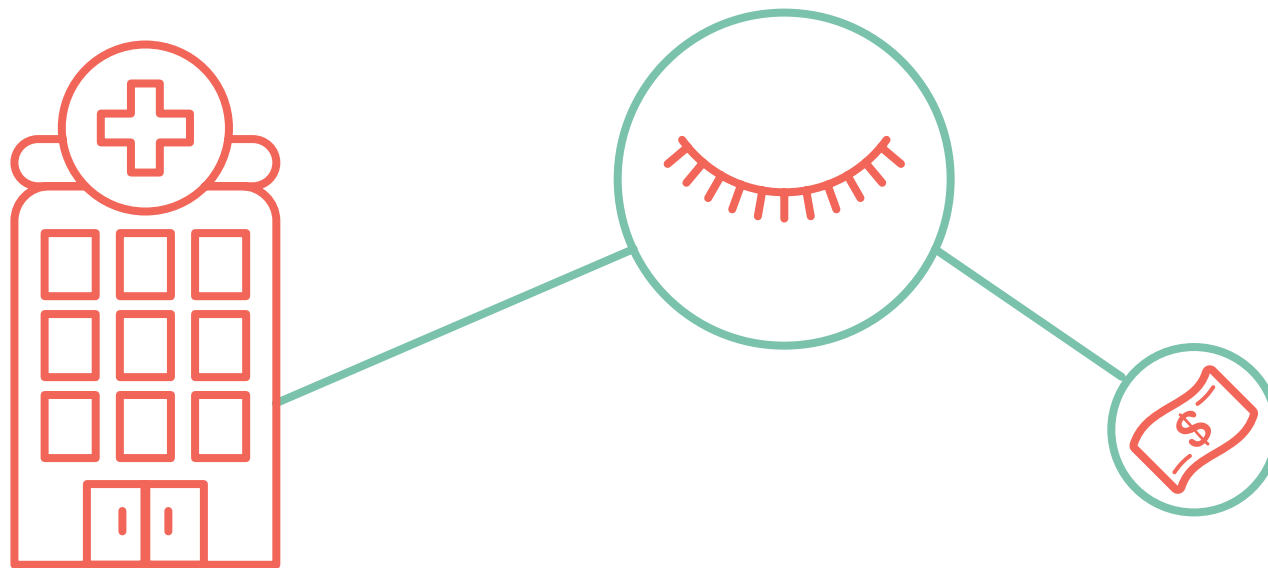
Did you know?

20 to 40 percent of all health care spending is wasted due to patient safety ignorance and some countries spend approximately $19 billion on patient safety errors.

The cost of errors

When health professionals overlook errors or choose not to properly train medical staff on system failures and errors, it can be costly for the hospital or medical facility.
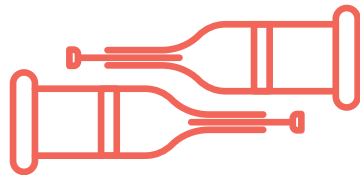
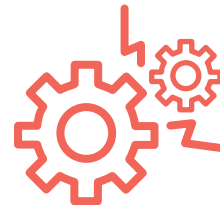**Additional hospitalization and longer bed stays**

Litigation costs, i.e. patients suing physicians and surgeons

HAIs

Disability caused by hospital injury or infection

Lost productivity for doctors and patients

Medical expenses

Other costs, such as emotional distress for family members or a damaged reputation of a doctor, can't be measured. However, these costs clearly indicate that more needs to be done to improve patient safety.

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The Future

As a medical professional, it's important to continue the progress that has been made in patient safety.

Changing mindsets

The first way to improve patient safety is by changing mindsets. Long before the concept of patient safety was established, many medical professionals chose to involve themselves in blame culture. Instead of taking responsibility for a negative outcome, they would blame it on someone, or something, else. At the time, this shifting of blame was accepted; today, it's not. Addressing and sharing mistakes is a much more effective process that allows people to learn, rather than covering them up. Essentially, people need to realize that errors are not caused by just one single action, but rather a series of actions, including:

Workplace conditions

Individual situational factors

Organizational and management decisions

Fun Fact

Blame culture most likely started because of a psychology term called attribution theory, which is simply when people try to make sense of the world.

Did you know?

Charles Perrow was one of the first people to speak out against the blame theory, stating that between 60% and 80% of system failures were attributed to "operator error."
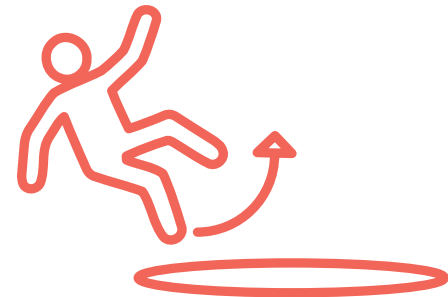
3 Ways to Manage Human Error

Instead of pointing fingers at one another, it's important to manage human error. The four ways to do this include:

Realizing humans' actions are often beyond their immediate control.
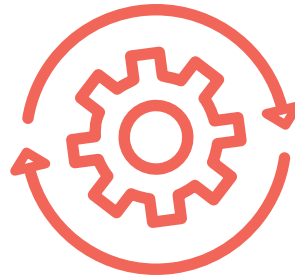
When a workforce is skilled, well-intentioned, and highly experienced, it's less likely that situations can go wrong as a result of people.

People can't avoid the actions they didn't intend to make.

Enact Violations

People may not learn from their mistakes if these mistakes aren't corrected. That's why it's important that every hospital and medical facility enforce a strict set of violations for anyone who doesn't follow patient safety protocol.

Why are violations so important?

If people are allowed to cut corners and get away with it, others will begin to mimic this behavior and errors will begin to occur in higher amounts. Instead, managers should set examples. Managers should hold employees accountable for their actions, and teach employees to hold each other responsible if they notice others committing errors.

If employees know they cannot get away with their actions because there will be consequences, they will be less likely to continue with that sort of dangerous behavior.

The 3 Types of Medical Violations

There are three common violations that medical staff seem to continually perform. They include:

Routine violations

Necessary violation

Optimizing violation

Example

Physicians who don't wash their hands between checking in on patients because they don't have time.

Example

A nurse who knowingly doesn't follow all the steps in medication dispensing because she doesn't have time.

Example

A surgeon lets an intern perform an unsupervised task on a patient because the surgeon is busy with his or her own patients.

Using these types of violations can help medical facilities avoid pointing fingers and instead view the problem as a systemic error. Instead of just blaming the doctor for failing to wash his hands, consider what caused him to skip that vital part of the process.

Ultimately, these violations can help further patient safety and care. So far, rules and policies that have been enforced have reduced medical errors.

For instance, between 2000 and 2010, the reuse rate of injection devices has decreased by 88 percent, and between 2010 and 2013, there has been a 17 percent reduction in rates of hospital-acquired conditions.

Implement training early

While continual training should be enforced for physicians and nurses, patient safety should primarily be enforced at the beginning, with students. The more they get accustomed to these good habits early on, the more likely they are to practice them. At the end of their education and training, students should know plenty about patient safety.

Patient safety rules

However, there are a few pertinent patient safety rules healthcare professionals should follow throughout their entire medical careers. These rules include:

1. Forming solid relationships with patients
2. Avoiding pointing fingers when mistakes happen
3. Practicing evidence-based care
4. Following strong ethical standards
5. Being aware of your own self-care
6. Maintaining a continuous care of patients
7. Understanding the reporting techniques for adverse events
8. Asking patients about their amenities back home to better understand other health systems

Several factors go into an effective patient safety strategy. While many people may cite issues such as a lack of funding for their high error rate, it's important to find ways to get around these hurdles to better improve the health care system. Many of these factors are simple and effective. Continual education and training, as well as learning from past mistakes, can help prevent future ones from occurring. Monitoring new staff members and enforcing policy violations when errors do happen can help create a better functioning system, which can lead to a better healthcare industry as a whole and a better tomorrow for patients.

This ebook is based on *Understanding Patient Safety* by Robert M. Wachter, MD, one of the more than 90 medical resources found on McGraw-Hill Education's **AccessMedicine**, the leading online reference for health care instruction and clinical reference.

Contact a member of the AccessMedicine team for more information: digitalsales@mhedu.com

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