

# Patient Safety

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# What is Patient Safety?(1)

(World Health Organization)

- ▶ The avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the processes of health care. These events include “**errors**,” “**deviations**,” and “**accidents**.” Safety emerges from the **interaction of the components** of the system; it does not reside in a person, device, or department. Improving safety depends on learning how safety emerges from the interactions of the components. Patient safety is a subset of **health care quality**.

# What is Patient Safety?(2)

([www.leapfroggroup.org](http://www.leapfroggroup.org))

- ▶ When we talk about patient safety, we're really talking about how hospitals and other health care organizations protect their patients from **errors**, **injuries**, **accidents**, and **infections**. While many hospitals are good at keeping their patients safe, some hospitals aren't. As many as **440,000 people die** every year from **preventable errors** in hospitals across the United States. It's up to everyone to make sure that patient safety is the number one priority at every hospital. Some hospitals have hidden dangers, but there are things you can do to protect yourself and your loved ones.

# Safety culture

(World Health Organization)

- ▶ A culture that exhibits the following five high-level attributes that health care professionals strive to operationalize through the implementation of strong safety management systems. (1) A culture where **all workers** (including front-line staff, physicians, and administrators) **accept responsibility** for the safety of themselves, their coworkers, patients, and visitors. (2) [A culture that] **prioritizes safety** above financial and operational goals. (3) [A culture that] encourages and rewards the **identification**, communication, and resolution of safety issues. (4) [A culture that] provides for **organizational learning** from accidents. (5) [A culture that] provides appropriate resources, structure, and **accountability** to maintain effective safety systems.

# 10 facts on patient safety

(World Health Organization)  
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- ▶ Patient safety is a serious global public health concern. There is a 1 in a million chance of a person being harmed while travelling by plane. In comparison, there is a **1 in 300** chance of a patient being **harmed during health care**. Industries with a perceived higher risk such as the aviation and nuclear industries have a much better safety record than health care.



- ▶ **Fact 1:** Patient harm is the **14th leading cause** of the **global disease burden**, comparable to diseases such as tuberculosis and malaria.

It is estimated that there are 421 million hospitalizations in the world annually, and approximately 42.7 million adverse events occur in patients during these hospitalizations. Using conservative estimates, the latest data shows that patient harm is the **14th leading cause** of **mortality** across the world.



► **Fact 2: While in hospital, 1 in every 10 patients is harmed**

Estimates show that in high income countries (HIC) as many as 1 in 10 patients is harmed while receiving hospital care. The harm can be caused by a range of incidents or adverse events, with **nearly 50%** of them being **preventable**. In a study on frequency and preventability of adverse events across 26 low- and middle-income countries (LMIC), the rate of adverse events was around 8%, of which 83% could have been prevented and 30% led to death. Approximately **two-thirds of all adverse events occur in LMICs**.



► **Fact 3: Unsafe use of medication harms millions and costs billions of dollars annually.**

Unsafe medication practices and medication errors are a leading cause of avoidable harm in health care systems across the world. Globally, the cost associated with medication errors has been estimated at **US\$ 42 billion annually**, not counting lost wages, productivity, or health care costs. **This amounts to almost 1% of global expenditure on health.** **Medication errors** occur when **weak medication systems** and/or **human factors** such as fatigue of personnel, poor working conditions, workflow interruptions or staff shortages affect prescribing, transcribing, dispensing, administration and monitoring practices, which can then result in severe harm, disability and even death.





► **Fact 4:** 15% of health spending is wasted dealing with all aspects of adverse events.

Recent evidence shows that 15% of total hospital activity and expenditure in OECD (Organization of Economic Cooperation and Development) countries is a direct result of adverse events, with the most burdensome events including venous thromboembolism, pressure ulcers and infections. It is estimated that the aggregate cost of harm in these countries alone amounts to trillions of US dollars every year.



- ▶ **Fact 5:** Investments in reducing patient safety incidents can lead to significant financial savings.

**Investments** in reducing patient safety incidents can lead to significant financial savings, not to mention better patient outcomes. In the United States alone, focused safety improvements led to an estimated **US\$ 28 billion in savings** in Medicare hospitals between 2010 and 2015.



► **Fact 6: Hospital infections affect 14 out of every 100 patients admitted.**

Of every 100 hospitalized patients at any given time, 7 in high-income countries and 10 in low- and middle-income countries, will acquire **health care-associated infections (HAIs)**, affecting hundreds of millions of patients worldwide each year. Each year around 3.2 million patients are infected with HAIs across the European Union and a total of 37 000 of them die as a direct consequence. Simple and low-cost infection prevention and control measures, such as appropriate **hand hygiene**, could reduce the frequency of HAIs by **more than 50%**.



► **Fact 7: More than one million patients die annually from surgical complications.**

Findings by WHO suggest that **surgery** still results in high rates of mortality globally, with at least 7 million people a year experiencing disabling surgical complications, from which more than 1 million die. Although perioperative and anesthetic-related mortality rates have progressively declined over the past 50 years, partially as a result of efforts to improve patient safety in the perioperative setting, they still remain **two to three times higher** in low- and middle-income countries than in high-income countries.



► **Fact 8: Inaccurate or delayed diagnoses affect all settings of care and harm an unacceptable number of patients.**

Research shows that at least 5% of adults in the United States experience a diagnostic error each year in outpatient settings. Recent postmortem examination research spanning decades has shown that **diagnostic errors** contribute to **approximately 10% of patient deaths** in the United States of America. In Malaysia, a cross-sectional study in primary care clinics ascertained a prevalence of diagnostic errors at 3.6%. Medical record reviews also suggest that diagnostic errors account for 6 to 17% of all adverse events in hospitals. Evidence from low- and middle-income countries is limited; however, the expected rate is higher than in high-income countries as the diagnosis process is further impacted by factors, such as limited access to care and diagnostic testing resources, insufficient qualified primary care providers and specialists and paper-based record systems.



- ▶ **Fact 9:** While the use of radiation has improved health care, overall medical exposure to radiation is a public health and safety concern.

The **medical use of ionizing radiation** is the **largest single contributor** to population exposure to radiation from artificial sources. Worldwide, there are over 3.6 billion x-ray examinations performed every year, with around 10% of them occurring in children. Additionally, there are over 37 million nuclear medicine and 7.5 million radiotherapy procedures conducted annually. **Inappropriate** or **unskilled** use of medical radiation can lead to health hazards both for patients and health care professionals.



► **Fact 10:** Administrative errors account for up to half of all medical errors in primary care.

Recent literature reviews have revealed that medical errors in primary care occur between 5 and 80 times per 100 000 consultations. **Administrative errors** - those associated with the systems and processes of delivering care - are the most frequently reported type of errors in primary care. It is estimated that from 5 to 50% of all medical errors in primary care are administrative errors.

