World Health Organization

Patient Safety Fact File

Patient Safety and Risk Management
Service Delivery and Safety

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10 facts on patient safety

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Patient safety is a serious global public health concern. It is estimated that there is a 1 in 3 million risk of dying while travelling by aeroplane. In comparison, the risk of patient death occurring due to a preventable medical accident, while receiving health care, is estimated to be 1 in 300. Industries with a perceived higher risk, such as the aviation and nuclear industries, have a much better safety record than health care does *(1)*.

To find out more, **read the 10 facts on patient safety.**

Add link to the .pdf file (with references)

Fact 1: One in every 10 patients is harmed while receiving hospital care

WHO_052183
WHO/G. Reboux

Estimates show that in high-income countries, as many as one in 10 patients is harmed while receiving hospital care *(2–5)*. The harm can be caused by a range of adverse events, with nearly 50% of them considered preventable *(6)*.

A study on the frequency and preventability of adverse events across 26 hospitals in eight low- and middle-income countries, showed the adverse event rate to be around 8%. Of these events, 83% were preventable, while about 30% were associated with death of the patient *(7,8)*.

Fact 2: The occurrence of adverse events due to unsafe care is likely one of the 10 leading causes of death and disability across the world

WHO_023411
WHO/C. Black

The occurrence of adverse events, resulting from unsafe care, is likely to be one of the 10 leading causes of death and disability worldwide *(9)*. Recent evidence suggests that 134 million adverse events occur each year due to unsafe care in hospitals in low- and middle-income countries (LMICs), resulting in 2.6 million deaths annually *(10)*.

Another study has estimated that around two-thirds of all adverse events resulting from unsafe care, and the years lost to disability and death (known as disability adjusted life years, or DALYs), occur in LMICs *(11).*

Fact 3: Four out of every 10 patients are harmed in primary and outpatient health care

WHO_035295
WHO/J. Gusmao

The provision of safe services is extremely important across all levels of health care, including in primary and outpatient (ambulatory) care, where the bulk of services are offered. Globally, as many as four out of 10 patients are harmed while receiving health care in these settings, with up to 80% of the harm considered to have been preventable. The most detrimental errors are related to diagnosis, prescription and the use of medicines.

Harm in primary and ambulatory care often results in hospitalization. It has been found, that across Organisation for Economic Co-operation and Development (OECD) countries, patient harm may account for more than 6% of hospital bed days and more than 7 million admissions *(12)*.

Fact 4: At least 1 out of every 7 Canadian dollars is spent treating the effects of patient harm in hospital care

WHO_052244
WHO/G. Reboux

A minimum of 1 out of every 7 Canadian dollars is spent treating the effects of patient harm in hospital care *(13)*. Recent evidence shows that 15% of total hospital expenditure and activities in Organisation of Economic Co-operation and Development (OECD) countries is a direct result of adverse events, with the most burdensome events being blood clots (venous thromboembolism), bed sores (pressure ulcers) and infections.

It is estimated that the total cost of harm in these countries alone amounts to trillions of US dollars every year *(4)*.

Fact 5: Investment in patient safety can lead to significant financial savings

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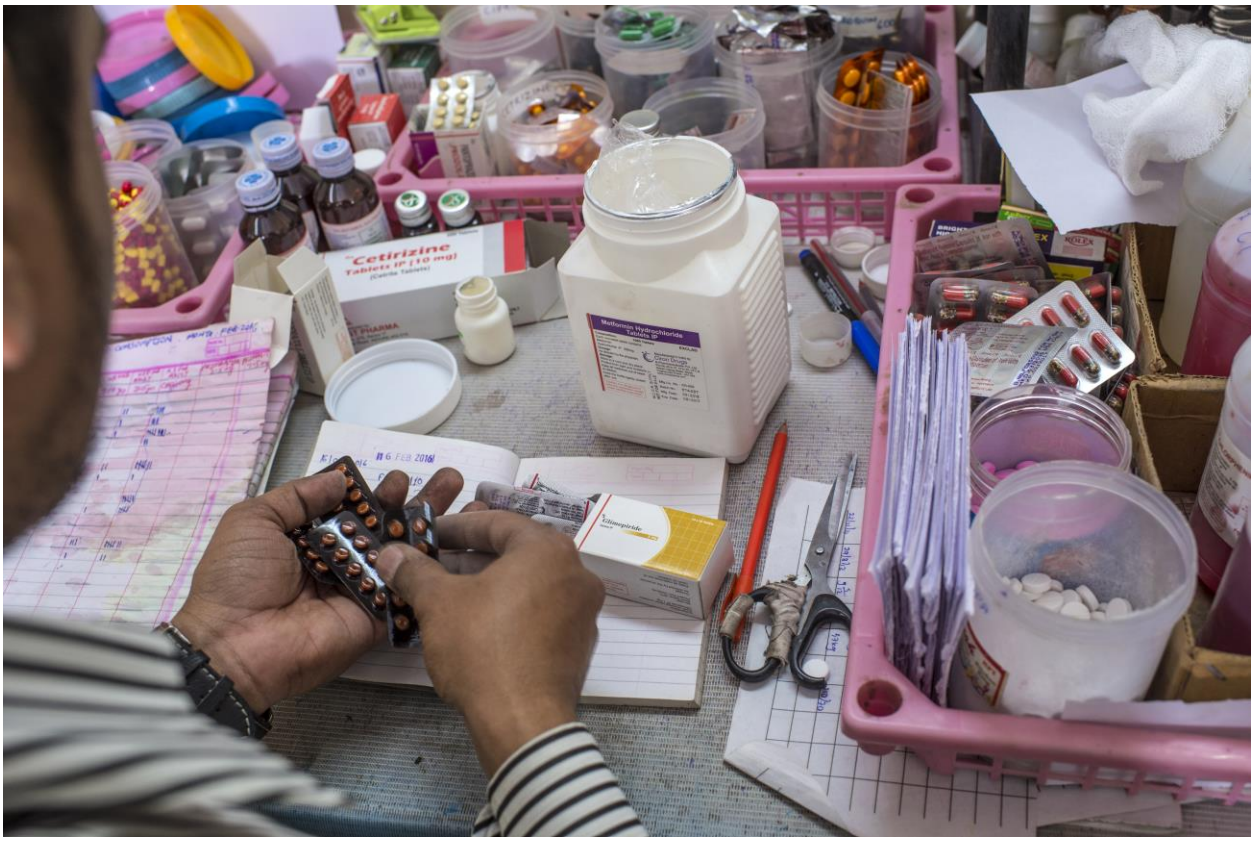
WHO/C. Black

Investment in improving patient safety can lead to significant financial savings and more importantly better patient outcomes. This is because the cost of prevention is typically much lower than the cost of treatment due to harm *(4)*. As an example, in the United States alone, focused safety improvements led to an estimated US$ 28 billion in savings in Medicare hospitals between 2010 and 2015 *(14)*.

Greater patient involvement is the key to safer care. Engaging patients is not expensive and represents a good value. If done well, it can reduce the burden of harm by up to 15%, saving billions of dollars each year– a very good return on investment *(12)*.

Fact 6: Unsafe medication practices and medication errors harm millions of patients and costs billions of US dollars every year



WHO_061387
WHO/A. Loke

Unsafe medication practices and errors – such as incorrect dosages or infusions, unclear instructions, use of abbreviations and inappropriate prescriptions – are a leading cause of avoidable harm in health care around 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 represents almost 1% of global expenditure on health *(15)*.

Medication errors may occur when weak medication systems and/or human factors such as fatigue, poor working conditions, or staff shortages affect prescribing, storage, preparation, dispensing, administration and monitoring practices. Any one or a combination of these can result in severe patient harm, disability and even death *(16)*.

Fact 7: Inaccurate or delayed diagnosis is one of the most common causes of patient harm and affects millions of patients

WHO_052172
WHO/G. Reboux

Diagnostic error, that is the failure to identify the nature of an illness in an accurate and timely manner, occurs in about 5% of adults in the United States outpatient care settings. About half of these errors have the potential to cause severe harm *(5,17)*. A study of primary care clinics in Malaysia established the occurrence of diagnostic errors at 3.6% *(18)*.

In the United States, extensive autopsy research performed in the past decades has shown that diagnostic errors contribute to approximately 10% of patient deaths. Furthermore, medical record reviews demonstrate that diagnostic errors account for 6–17% of all harmful events in hospitals *(19)*.

Evidence from low- and middle-income countries is limited, however, it is estimated that the rate is higher than in high-income countries as the diagnostic process is negatively impacted by factors such as limited access to care and diagnostic testing resources *(20)*.

Fact 8: Hospital infections affect up to 10 out of every 100 hospitalized patients

WHO_059226
WHO/E. Longarini

Out of every 100 hospitalized patients, at any given time, seven in high-income countries and 10 in low- and middle-income countries will acquire one or more health care-associated infections (HAIs) *(5,21,22)*. Hundreds of millions of patients worldwide are affected by HAIs each year. People with methicillin-resistant *Staphylococcus aureus* (MRSA), a bacterium increasingly found in hospital settings that is resistant to most antibiotics, are estimated to be 64% more likely to die than people with a non-resistant form of the infection *(23).*

Regardless of a country's income level, different types of interventions, including appropriate hand hygiene, can reduce HAI rates by up to 55% *(24)*.

Fact 9: More than 1 million patients die annually from complications due to surgery

WHO_052234
WHO/G. Reboux

Findings by WHO suggest that, globally, surgery still results in high rates of illness, disease and death. Unsafe surgical care procedures cause complications in up to 25% of patients. Almost 7 million surgical patients suffer significant complications annually, 1 million of whom die during or immediately following surgery *(25).*

As a result of improved patient safety measures, deaths related to complications from surgery have decreased in the past 50 years. Nevertheless, they remain two to three times higher in low- and middle-income countries than in high-income countries *(26)*.

Fact 10: Medical exposure to radiation is a public health and patient safety concern

WHO_052204
WHO/G. Reboux

Worldwide, there are more than 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 annually. Inappropriate or unskilled use of medical radiation can lead to health hazards, both for patients and staff *(27)*.

Radiation errors involve overexposure to radiation and cases of wrong-patient or wrong-site identification. A review of 30 years of published data on safety in radiotherapy estimates that the overall incidence of errors is around 15 per 10 000 treatment courses *(28)*.

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