Patient Safety : A Call for Action in Our Hospitals

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Introduction :

Patient safety is an important global public health issue. Adverse events may result from problems in practice, products, procedures or systems resulting in serious consequences for patients.[1] The same was prominently experienced during covid pandemic where number of patients coming for admissions overwhelmed the hospital patient safety system. It is therefore imperative that healthcare systems transform themselves to be better and safer.

'To err is human: building a safer health system". The path breaking report by the institute of medicine of the National academy of science, USA gave a wakening call to the medical world, letting them know of staggering number of patients harmed by medical error. [2]

- Medical errors occur at a rate of 1.7 errors per patient /day in ICU's as indicated in the report recognizing that medical errors impact 1 in every 10 patients around the world.
- Each year, 134 million adverse events occur in hospitals in low- and middle-income countries (LMICs), due to unsafe care, resulting in 2.6 million deaths.
- Errors are related to diagnosis, prescription and the use of medicines Globally, as many as 4 in 10 patients are harmed in primary and outpatient health care. Up to 80% of harm is preventable.

WHO in its report on patient safety has identified that patient safety issues are all pervasive in the entire patient care process, systems and sub-systems across all specialties. [3]

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What is patient safety?

Patient safety is defined as the reduction of unnecessary harm associated with health care to an acceptable minimum. It is a fundamental element of health care and is intended for freedom for a patient from unnecessary harm or potential harm associated with provision of health care. Major areas of concern are hospital associated infections (HAI), unsafe surgeries, unsafe injections, safe births, medication safety, blood safety and faulty medical devices. In 2013, the unsafe care is third in rank of causes of death globally after heart disease and cancer.

The first idea of patient safety is enshrined in the Hippocratic Oath itself, which emphasizes upon the concept of 'do no harm'. Though concept is old but it is very much relevant today with advent of modern medicine and ever more complicated procedures. For too long in healthcare the mind set has been that patient harms are inevitable, that working in isolation/silos is natural and the heroism rather than thoughtful design keeps patient safe. These beliefs persist today and are significant reasons for the perpetuation of harm. Thousands of patients continue to die and many more are injured as a result of preventable medical errors.[4]

Why does patient harm occur?

A mature health system takes into account the increasing complexity in health care settings that make humans more prone to mistakes.[3] For example, a patient in hospital might receive a wrong medication because of a mix-up that occurs due to similar packaging. In this case, the prescription passes through different levels of care starting with the doctor in the ward, then to the pharmacy for

dispensing and finally to the nurse who administers the wrong medication to the patient. Had there been safe guarding processes in place at the different levels, this error could have been quickly identified and corrected. In this situation, a lack of standard procedures for storage of medications that look alike, poor communication between the different providers, lack of verification before medication administration and lack of involvement of patients in their own care might all be underlying factors that led to the occurrence of errors.[3] Traditionally, the individual provider who actively made the mistake (active error) would take the blame for such an incident occurring and might also be punished as a result. Unfortunately, this does not consider the factors in the system previously described that led to the occurrence of error (latent errors). It is when multiple latent errors align that an active error reaches the patient.

To err is human, and expecting flawless performance from human beings working in complex, high-stress environments is unrealistic. Assuming that individual perfection is possible will not improve safety. Humans are guarded from making mistakes when placed in an error-proof environment where the systems, tasks and processes they work in are well designed. Therefore, focusing on the system that allows harm to occur is the beginning of improvement, and this can only occur in an open and transparent environment where a safety culture prevails. This is a culture where a high level of importance is placed on safety beliefs, values and attitudes and shared by most people within the workplace.

Patient safety at hospital:

The components of patient safety program at hospital have following essentials health care providers, recipients of health care, health care infrastructure and reporting and feedback on performance. If these issues are addressed appropriately, there appears to have a wide scope for improvement. Below are some of the patient safety situations causing most concern. [4]

Medication errors are a leading cause of injury and avoidable harm in health care systems: globally, the cost associated with medication errors has been estimated at US$ 42 billion annually.

Health care-associated infections occur in many of hospitalized patients in high-income countries and low- and middle-income countries respectively.

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. [3]

Unsafe injections practices in health care settings can transmit infections, including HIV and hepatitis B and C, and pose direct danger to patients and health care workers; they account for a burden of harm estimated at 9.2 million years of life lost to disability and death worldwide (known as Disability Adjusted Life Years - DALYs). [5]

Diagnostic errors occur in about 5% of adults in outpatient care settings, more than half of which have the potential to cause severe harm. Most people will suffer a diagnostic error in their lifetime. [6]

Sepsis is frequently not diagnosed early enough to save a patient's life. Because these infections are often resistant to antibiotics, they can rapidly lead to deteriorating clinical conditions, affecting an estimated 31 million people worldwide and causing over 5 million deaths per year. [7]

Venous thromboembolism (blood clots) is one of the most common and preventable causes of patient harm, contributing to one third of the complications attributed to hospitalization. Annually, there are an estimated 3.9 million cases in high-income countries and 6 million cases in low- and middle-income countries. [8]

Scenario in India

In our country NABH was pioneer in introducing this concept and culture of patient safety and quality since 2005 through national accreditation standards for hospitals. Government of India has introduced the concept of consolidation of this patient safety initiative through National patient safety framework. Material-o-vigilance program, pharma covigilance program, AEFI tracking system post immunization, surveillance of antimicrobial resistance program and healthcare associated infections. NABH [9] as a national body has identified following patient safety goals

Goal One - Identify patients correctly.

Goal Two - Improve effective communication.

Goal Three - Improve the safety of high-alert medications.

Goal Four - Ensure safe surgery.

Goal Five - Reduce the risk of health care-associated infections.

Goal Six - Reduce the risk of patient harm resulting from falls.

Actions recommended to be taken by hospital to improve patient safety and quality [9]

a. The hospital must develop patient-safety programme and implement it through a multi-disciplinary committee called patient safety committee. This committee should consist of manager, nursing representatives, clinicians and support service personnel. The purpose to protect the patient from harm either from the environment or for lack of appropriate care or safety measures.

b. The patient-safety programme is documented as a manual which covers all the major elements related to patient safety and risk management. Risk management shall include risk identification and risk mitigation. All adverse events ranging from "no harm" to "sentinel events" should be covered including a robust incident reporting system.

c. Hospital should designate a clinician/senior nurse as patient safety officer for coordinating and implementing the patient-safety programme with a good knowledge of both patient and general safety.

d. The patient safety programme is driven by top management through appropriate training mechanism like regular training programme for doctors and staff or printed materials.

e. The patient-safety programme must identify opportunities for improvement based on review of facility inspection rounds and analysis of key-safety indicators. Program needs to be updated based on findings of audits, the review carried out by the safety committee, etc.

f. The Hospital needs to adapt and implements national/international patient-safety goals/ solutions.

g. The hospital could consider developing and monitoring certain specific patient safety indicators like,

1. Incidence of medication errors. Percentage of admissions with adverse drug reaction(s).
2. Percentage of medication charts with error prone abbreviations.
3. Percentage of patients receiving high-risk medications developing adverse drug event.

Infection prevention and control indicators such as

1. Catheter Associated Urinary Tract Infection rate,
2. Ventilator Associated Events rate,
3. Central line associated bloodstream infection rate, Surgical site infection rate.

Some other patient safety indicators like

1. Incidence of Communication errors including handovers between doctors/nurses,
2. Incidence of Patient identification errors,
3. Compliance to Hand hygiene practice,
4. Compliance rate to medication prescription in capitals

New and practical tips suggested to improve patient safety culture

The Agency for Healthcare Research and Quality, USA[10] recommends certain evidence based practical tips to prevent adverse events from occurring in our hospitals.

a. **Re-engineer hospital discharges.** Reduce potentially preventable readmissions by assigning a staff member to work closely with patients and other staff to reconcile medications and schedule necessary follow-up medical appointments.

b. **Prevent venous thromboembolism.** Eliminate hospital - acquired venous thromboembolism (VTE), the most common cause of preventable hospital deaths. (VTE protocol).

c. **Educate patients about using blood thinners safely.** If used incorrectly, blood thinners can cause uncontrollable bleeding and are among the top causes of adverse drug events.

d. **Limit shift durations for medical residents and other hospital staff if possible.**

e. **Use good hospital design principles.** Follow evidence-based principles for hospital design to improve patient safety and quality. Prevent patient falls by providing well-designed patient rooms and bathrooms.

f. **Measure your hospital's patient safety culture.** Survey hospital staff to assess your facility's patient safety culture.

g. **Build better teams and rapid response systems.** Train hospital staff to communicate effectively as a team.

h. **Insert chest tubes safely.** Remember UWET when inserting chest tubes. Universal Precautions (achieved by using sterile cap, mask, gown, and gloves); Wider skin prep; Extensive draping; and Tray positioning.

Summary

Patient safety is a well-recognized global health issue. Patient safety is defined as the reduction of unnecessary harm associated with health care to an acceptable minimum. Commonest patient safety issues in hospitals identified worldwide are healthcare associated infections, medication errors, unsafe surgeries, diagnostic errors and venous thromboembolism. Various national and international agencies have defined patient safety goals and in India NABH is the main accreditation agency which has defined them. Identify patients appropriately, improve effective communication, improve the safety of high-risk medication, ensure safe surgery, reduce the risk of healthcare associated infections, reduce the risk of patient fall. A call for action in our hospital has been defined with steps like identifying patient safety program, patient safety manual to be documented, identifying patient safety indicators, developing patient safety culture in the hospital. All of this is possible only through top management commitment and support for patient safety activities. Improving skills and awareness in reporting patient harm incidents and then analyzing them and taking corrective and preventive actions are the key in improving hospital wide patient safety.

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