

Patient Safety

A. Why patient safety is so important -

1. The first principle of Health Care service is “*first to do no harm*” (*Primum non nocere (Latin)*), Hippocrates oath). With advancement of Medical Technology, more so in last few decades, patient care processes have become more complex. Patient care requires optimum coordination between Healthcare providers (doctors, nurses, technicians, etc), technology (like CT Scan, MRI, C Arm, etc), drugs, work-practices, processes, etc. This makes modern hospitals one of the most vulnerable and high risk places, prone for making mistakes that may result in death or serious injuries to patients, whom it is supposed to cure.

2. In India, though precise data is not available regarding medical errors, it is estimated that around 5.2 million injuries occur due to medical errors, resulting in around 3 million preventable deaths every year. For every 100 Hospitalization average 12.7 adverse events occurs. (Ashsih Jha, BMJ Quality & Safety, Sept 2013)

3. Mishaps from medications, hospital-acquired infections and blood clots that develop in legs from being immobilized in the hospital (post-operative, after surgery & plaster, prolonged convalescence, unconscious patient) are the biggest source of adverse events.

4. Statistically it has been estimated that there is 1:100,000,000 (100 million) chance of Nuclear Power Plant Accident, 1:10,000,000 (10 million) chance of Airline Crash, while for the Preventable Hospital Death, the chances are 1: 300 (Lucian Leape 2001). This shows vulnerability of the patients in hospitals.

5. Public hospitals are equally prone to mistakes because of high patient load, more so after launch of NRHM, which has now expanded to become NHM. This makes it utmost important for us to have adequate safety measures and system in place for ensuring patient safety within the hospitals. It helps in improving the clinical outcome, reducing cost of the hospital care, as well safeguards the health care providers from avoidable litigations.

B. What constitutes Patients Safety-

1. **Physical Safety** - This includes safety of health care infrastructure including

a. Designing, planning and maintenance of hospital infrastructure - e.g. Location of critical departments, segregation of general and patients traffic within the hospital, provision of ramps, and annual preventive maintenance of the facility. It also includes the measures taken for making building earthquake resistant especially in earthquake prone area.

b. Safety of electrical installation - secured wiring, adequate earthing, availability of standard and adequate power outlets, display of danger signs and a system of periodic check-up and power audit of electrical installations in the hospital, special areas requiring high power load (ICU, Cardiac care unit, SNCU) are few areas, needing special attention for the safety.

2. Safety of engineering and support services - This includes safe installation & operations of hospital equipment, periodic inspections & maintenance, mandatory alternate electric supply, intercom connection, Emergency alarm system for lifts and central oxygen and vacuum supply, regular inspection of water quality as well adequate alternate power backup arrangements especially for critical areas like ICU, SNCU, OT and Labour room.

3. Fire Safety - This includes availability of fire extinguisher (correct type, adequate in number at correct location, skill to use them), fire exit plan, training and mock drill of staff for using fire fighting equipment and evacuation.

4. Safe Environment in Hospital - Clean and hygienic environment in patient care areas is essential for providing safe care. This includes

- a) Proper cleaning and decontamination of patient care and procedure areas like labour table, OT, wards, injection rooms, dressing room, etc.
- b) Proper segregation, storage and disposal of biomedical waste as per guidelines (Biomedical Waste Rules 1998)
- c) Ensuring adequate air exchanges especially in high-risk area ICU, SNCU, OT, etc.
- d) Proper sewage disposal and prevention of water logging in health care facility
- e) Measures for preventing rodents, pest control and stray animals in patient care

5. Safety of Clinical Care -

a. Infection Prevention Practices -

- i. Ensuring proper hand washing practices among the care providers (provision for hand washing facilities, correct technique (6-steps), and ensuring practices)

- ii. Proper disinfection/ sterilization of surgical instruments and surfaces
- iii. Use of personal protection equipment's like gloves, masks, apron, etc.
- iv. Periodic immunization and medical check-up of the care providers

b. Medication Safety -

- i. Proper identification of patient before drug administration,
- ii. Double check of drug and dosages of high alert medicines,
- iii. Maintenance of expiry dates of drugs,
- iv. Segregation of 'look alike and sound alike' drugs (e.g. Digene & Digoxin (for heart), Fortwin & Fortam, Daonil & Dapsonil), and
- v. Ensuring that medical orders are written in legible and comprehensible writing

c. Identification and monitoring of vulnerable and high-risk patients (old age, children, stupors/ comatose patients, under drugs / sedation, domestic violence victims, etc.)

d. Proper identification of surgical sites and use of surgical safety checklists (WHO check-lists)

e. Monitoring and reporting of adverse events like hospital acquired infections and adverse drug reaction. It helps in taking preventive action (NOT PUNITIVE ACTION)

C. Steps taken by Government of India for ensuring Patient Safety especially in Public Hospitals and Nation Health Program -

1. Government of India has recently launched *National Quality Assurance Programme* for Public Health Facilities. For ensuring quality of services National Quality assurance standards have been published, which incorporate all essential requirements regarding patient safety - physical safety, drug safety and infection control as mentioned above. There are a total of eight (08) 'areas of concern' in the recently launched Quality Standards, and Infection control forms an 'Area of Concern' under the quality standards, giving the infection due importance.

In the area of 'Clinical Services', we have a designated standard for Drug safety (Standard no E-7), which states that "*The facility has defined procedure for safe drug administration*". This standard would be measured by five (05) measurable elements.

Physical Infrastructure including preparedness for the fire safety in each department would be measured under the Departmental check list.

While doing the quality assessment of health facilities, there is assessment at three levels -

- a) Facility level (continuous internal assessment)
- b) Periodical Assessment by the State team
- c) External Assessment by the Government of India (MoHFW)

Thus, in the new Quality System, it is the endeavour of MoHFW to give due importance to patient safety, so that public health facilities are safe for the patients.

Public Health Facilities providing quality of services according to these standards will be provided certification and financial incentives by government of India.

2. Indian Public Health Standards (IPHS) also provide the norms for the Infrastructure and Disaster preparedness.

3. For better implementation of infection prevention practices, and also for bio-medical waste management, the Government of India has published Infection management and environment plan (IMEP) guidelines for public health facilities. All states are provided requisite financial support under the NRHM to implement these guidelines.

4. For safety under National Immunization Programme, the Government of India has published AEFI (Adverse Event following Immunization) guidelines. AEFI committees have been constituted at district, state and national level that monitor and take appropriate actions vaccine safety under immunization programme.

4. For safe care of pregnant women, especially in labour room and maternity wards, Government of India has published MNH tool kit, which includes WHO Safe Birthing Checklist to ensure adherence to clinical protocols and prompt identification of danger sign and prompt referral.

D. Recommendations-

Some of the additional measures, promoting patient safety may require further deliberations and are given below:

1. Formation of a nodal body/Competent Authority at central level (Government or Autonomous body) with branches in states to promote patient safety by conducting research, monitoring of safety regulations,

investigation of adverse events, and giving recommendation to the Central and State government.

2. Establishment and strengthening of blame-free reporting and learning systems on adverse events that provide information on the extent, types and causes of errors, and adverse events.
3. Establishment of a central database of safety related issues and events. Healthcare workers should be encouraged to report all safety related events by establishing an open, fair and non-punitive environment. Protection shall be provided to the whistle blowers.
4. Encouraging involvement of community and NGOs in implementation and monitoring of Patient safety measures.
5. Patient empowerment: awareness campaign to make public aware of their rights to safe healthcare and avenues open to them in case of safety violations.
6. A system of impartial assessment of safety level of all hospitals and District/State/National level awards for SAFEST HOSPITAL.
7. Observing “Patient Safety Day” on a designated day, every year.
8. Promote education and Training of healthcare workers on patient safety by conducting Short-term courses, embedding patient safety in undergraduate and post graduate education, on the job training, and continuing medical education (CME) programs.
9. Develop and promote research on patient safety.