
UNIT 1 PATIENT AND WORKER SAFETY IN HEALTH CARE

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1.0 INTRODUCTION

In hospitals the most important stakeholders are patients and health care staff. Both are working on opposite sides of each other and have same propensity to fall sick due to the closed environment and frequent exposure with each other. A recent study conducted by Johns Hopkins University in the United

States of America said that more than 250,000 people in the U.S. die every year from medical errors. Other reports claim the numbers to be as high as 440,000. Medical errors are the third-leading cause of death after heart disease and cancer in USA. People get admitted in the hospital to get better and not affected by something which is not their fault. Many times due to negligence on their part they put themselves at risk of getting diseased. Majority of these illnesses are associated with hospital environment which is preventable and avoidable. Recently the awareness about the patient safety has increased amongst the common people. World Health Organization and the Ministry of Health and Family Welfare, Government of India has released detailed policy document relating to patient safety.

In this unit you will learn about different aspects of patient safety. Safety of health care worker is related to the safety of patients. As the transmission of infection between the patient and the health care worker is two way, protecting both of them would be the priority of any health care setting.

1.1 OBJECTIVES

After studying this unit, you should be able to:

- understand the importance of patient safety;
- discuss the need of patient safety;
- explain the relationship between the patient and health care worker safety;
- find ways to keep patient and health care worker safety in mind while managing a hospital; and
- recognize the importance of hospital acquired infections in patient and health care worker's safety

1.2 IMPORTANCE OF SAFETY

Hospital or any setting where health care is delivered is full of health risks to its occupants. If standard precautions are not taken, health of both patients and staff are at risk. Health activists has highlighted the risks of admitted patients in the hospitals innumerable times. While addressing the issues of rights of admitted patients they regularly advise on keeping oneself safe in the hospital environment. It is true that the risk of nosocomial infection is real in hospital setting, at the same time we should not forget the risks which health care professionals expose themselves while working in the hospital. The hospital, nursing home or clinic has many different types of health hazards at even unimaginative places. The obvious health hazard while working in the hospital is pricking oneself with sharp needle or cutting his skin while handling scalpels. Many a times the health worker need to physically transfer a morbid obese patient form one place to another for some investigation or for some other purpose. It may result in some musculoskeletal injuries. Lifting heavy instruments improperly or without any assistance also exposes themselves to these injuries. A mesh of wires on the floor may cause fall and head injuries to the busy health care workers. The hospital environment is always stressful for workers and patients. A little bit on inattention may cause physical injury to both patient and health care worker.

1.2.1 Patient Safety

The World Health Organization defines patient safety as “*the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum*”. No health care intervention is absolutely safe and is most of the times associated with some risks. Even taking a simple pain killer like paracetamol can cause adverse reaction to anybody taking it. Patient may face some risk while care is being provided to him. This risk must be minimum and the benefit must outweigh the risks. As technology and knowledge advances the risk gradually comes down. But there won't be a time when there will not be any risk to a patient admitted in health care setting.

The area of patient safety is gradually gaining ground as the patients are becoming more aware of the workings of hospitals. The healthcare providers on their part are taking all efforts to minimize the risks of admitted patients by following the guidelines and protocols. Still accidents happen and patient safety becomes an issue.

1.2.2 Health Worker Safety

A healthy and competent worker can only give quality services to patients. Healthcare workers may come into contact with a number of sources of infection either through direct contact with patients or with contaminated materials, including body fluids, tissues, waste, laundry, contaminated surfaces etc. Patient handling tasks pose increased ergonomic risk if they are repetitive, done in awkward postures or done using a great deal of force. Lifting heavy objects including manually lifting immobile patients can cause serious musculoskeletal injuries. Similarly, overexertion, multiple lifts in one shift, lifting alone without anyone's help, lifting un-cooperative, confused patients can cause dislocation of vertebra in vertebral column who has predisposing factors. Lifting obese patients has become a norm in bariatric clinics and wards. Therefore, safety of health worker is as important as of patient.

1.2.3 Patient Safety Taxonomy

The National Quality Forum based in Washington DC has written definitions of the terms associated with patient's safety in its report titled ‘*Standardizing a Patient Safety Taxonomy*’. They define harm ‘as the process of care failure which may cause temporary or permanent impairment of physical or psychological body functions or structure’. They have classified the safety issues of patients under various categories. Some of the categories are:

- Type: errors are further classified regarding domain, or where they occurred across the spectrum of health care providers and settings,
- communication: failure of communication between patient or patient party and practitioners, practitioner and para-medical staff, or among doctors,
- patient management: improper delegation, failure in following advice, failure in tracking, wrong referral, or wrong use of technology,
- clinical performance: it may be either before, during or after intervention.

They have also classified the prevention activities in following domains:

Psychosocial Hazards

- universal preventive strategies: these strategies should be implemented throughout the organization
- selective: some steps should be taken in certain high-risk areas
- indicated: these are specific to a clinical or organizational process that has failed or has high potential to fail.

Check Your Progress 1

1. Define patient security?

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2. What is National Quality Forum?

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1.3 CURRENT SITUATION OF PATIENT SAFETY

Patient safety is not only the concern of developing countries. It is a burning issue in developed countries as well. Nearly 10% of the admitted patients are harmed in a way or other in developed countries. This include adverse reaction to the treatment provided or errors on behalf of health care organization and its people. Majority of the risk is due to hospital acquired infections. Modelling studies has shown 7% and 10% admitted patients in developed and developing countries respectively will acquire Health Care-Associated Infections (HAIs) at any given point of time. In absolute numbers it turns out to be millions of patients worldwide each year. Simple and low-cost infection prevention and control measures, such as appropriate hand hygiene, can reduce the frequency of HAIs by more than 50%.

There are millions of medical devices available worldwide. The majority of the world's population is denied adequate access to safe and appropriate medical devices within their health systems. More than half of low- and lower middle-income countries do not have a national health technology policy which could ensure the effective use of resources through proper planning, assessment, acquisition and management of medical devices. With time risks associated with some interventions has decreased. One of the best example is the use of injections. With more awareness and use of single-use needles and syringes the risks associated with giving contaminated injections has decreased substantially. An estimated 234 million surgical operations are performed globally every year. Surgical care is associated with a considerable risk of complications. Surgical care errors contribute to a significant burden of disease even though 50% of complications associated with surgical care are avoidable. Safety studies show that additional hospitalization, litigation costs, infections acquired in hospitals, disability, lost productivity and medical expenses cost some countries as much as US\$ 19 billion annually. The economic benefits of improving patient safety are therefore compelling. Industries with a perceived higher risk such as the

aviation and nuclear industries have a much better safety record than health care. There is a 1 in 1,000,000 chance of a traveler being harmed while in an aircraft. In comparison, there is a 1 in 300 chance of a patient being harmed during health care.

1.4 NURSING AND PATIENT SAFETY

It is the nursing staff in a hospital who stays with the patients all the time. Proper and timely nursing can prevent many catastrophes in the health care setting. We all know the contributions of Florence Nightingale in the nursing arena. She analyzed mortality data among British troops and accomplished significant reduction in mortality through organizational and hygienic practices. She also created the world's first performance measures of hospitals in 1859. Noted scientists and researchers has formulated the guidelines of quality nursing in hospitals. These quality assurance models beautifully merges the societal and professional values with the most current scientific knowledge.

Nurses are at the center of patient safety puzzle framework in a health care setting. They are both directly and indirectly involved in safety of patients. They should collaborate with others in providing the best medical care while patients are in hospital. Most of the things may not be in the hands of the nurses, they should coordinate and integrate the multiple aspects of quality and safety. Lack of communication is the root cause of many a failures in health care settings. Nurses by virtue of their work and charming personalities can play a pivotal role by communicating effectively and thus preventing many errors and misunderstanding between the patient or patient's party and the physicians.

Check Your Progress 2 (Fill in the blanks)

1. Around ____ % of hospital infections are avoided if proper hand hygiene is followed in hospitals.
2. Medical errors rank number _____ as the cause of death in the USA.

1.5 IMPROVING SAFETY BY UNDERSTANDING ERROR

Every day, physicians, nurses, pharmacists, and other hospital personnel recognize and correct errors and usually prevent harm. Errors, as defined by the World Health Organization is "*the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim,*" do not all result in injury or harm. Errors that do cause injury or harm are sometimes called preventable adverse events—that is, the injury is thought to be due to a medical intervention, not the underlying condition of the patient. Errors that result in serious injury or death, considered "sentinel events" by the Joint Commission signal the need for an immediate response, analysis to identify all factors contributing to the error, and reporting to the appropriate individuals and organizations to guide system improvements.

Leape greatly enhanced our understanding of errors by distinguishing between two types of cognitive tasks that may result in errors in medicine. The first type of task occurs when people engage in well-known, often-repeated processes, such as driving to work or making tea. Errors may occur while

performing these tasks because of interruptions, fatigue, time pressure, anger, distraction, anxiety, fear, or boredom. By contrast, tasks that require problem solving are done more slowly and sequentially, are perceived as more difficult, and require conscious attention. Examples include making a differential diagnosis and readying several types of surgical equipment made by different manufacturers. Errors here are due to misinterpretation of the problem that must be solved and lack of knowledge. Keeping in mind these two different kinds of tasks is helpful to understanding the multiple reasons for errors and is the first step in preventing them.

People make errors for a variety of reasons that have little to do with lack of good intention or knowledge. Humans have many intellectual strengths (e.g., large memory capacity and an ability to react creatively and effectively to the unexpected) and limitations (e.g., difficulty attending carefully to several things at once and generally poor computational ability, especially when tired). Improving safety requires respecting human abilities by designing processes that recognize human strengths and weaknesses.

There are many opportunities for individuals to prevent error. Some actions are clinically oriented and evidence-based: communicating clearly to other team members, even when hierarchies and authority gradients seem to discourage it; requesting and giving feedback for all verbal orders; and being alert to “accidents waiting to happen.” Other opportunities are broader in focus or address the work environment and may require clinical leadership and changing the workplace culture: simplifying processes to reduce handoffs and standardizing protocols; developing and participating in multidisciplinary team training; involving patients in their care; and being receptive to discussions about errors and near misses by paying respectful attention when any member of the staff challenges the safety of a plan or a process of care.

However, large, complex problems require thoughtful, multifaceted responses by individuals, teams, and organizations. That is, preventing errors and improving safety require a systems approach to the design of processes, tasks, training, and conditions of work in order to modify the conditions that contribute to errors.

1.6 STRESS IN THE HEALTH CARE PROFESSIONS

Numerous recent studies have explored work stress among health care personnel in many countries. Investigators have assessed work stress among medical technicians, radiation therapists, social workers, occupational therapists, physicians, and collections of health care staff across disciplines. Many of these investigations considered the effect of stress and burnout among nurses on patient outcomes. These studies examined burnout in relation to increased mortality, failure to rescue, and patient dissatisfaction. Similarly, in an investigation of the relationship between personal stress and clinical care, 225 physicians reported 76 incidents in which they believed patient care was adversely affected by their stress.

Most of the investigations explored the effects of work stress and burnout on health care personnel in acute care settings. Findings are also emerging about differences in work stress based on shift length. Shift length, 8-hour versus 12-hour, was explored in relation to both burnout and role stress. In a random

sample of Michigan nurses, registered nurses (RN) working 12-hour shifts (n = 105) reported significantly higher levels of stress than RNs working 8-hour shifts (n = 99). However, when differences in experience were controlled, stress was similar in both groups. Conversely, a study from Poland illustrated that nurses working 12-hour shifts compared unfavorably in several aspects to nurses working 8-hour shifts. Although the type of nursing personnel involved was unclear, the nurses on 12-hour shifts experienced significantly more chronic fatigue, cognitive anxiety, and emotional exhaustion.

Check Your Progress 3 (Answer in 100 words)

What is a sentinel event?

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Did you know?

Healthcare workers are hurt on the job at nearly double the rate of private industry. Even more often than construction workers!

1.7 PRESENT SITUATION OF PATIENT SAFETY IN INDIA

Following is the detailed account of the current situation of patient safety in India.

1.7.1 Policies and Strategies at National Level

Most of the following deliberation is taken from National Patient Safety Implementation Framework (2018-2025), India released by the Ministry of Health & Family Welfare, Government of India in 2018.

- Laws, regulations, policies and strategies on the quality of care do exist in the country, however they are largely fragmented.
- Consumer protection act deals with medical negligence and deficiency of services but has failed to define the rights of the patients. Legal rights of the patients are set out in the Clinical Establishment Act (CEA), but the CEA is not being implemented across India.
- National Pharmaceutical Pricing Authority (NPPA) and Drugs Controller General of India (DCGI) have mechanisms to see that patients' rights in terms of medication and device are protected and they are not overcharged.
- National Health System Resource Centre (NHSRC) has been designated as nodal agency at national level for implementing Quality Assurance program in public health facilities. National Quality Assurance Standards have been developed by NHSRC for specific quality and patient safety needs of public health institutions.
- The Ministry of Health and Family Welfare (MoHFW) publishes a regular national report on the performance of the health care system; however,

it is limited to indicators for quality of care that in turn are designed around Reproductive, Maternal, Neonatal and Child Health (RMNCH).

- Under the Right to Information Act, all public facilities must report all information available at institutional level.
- Selected Private sector chain hospitals and individual institutions have implemented substantial measures to implement patient safety.
- Public reporting on quality of care to some extent exists in the country, but needs adjustment and improvement. Demand from population side is not adequate enough to influence policy directions.
- Accreditation mechanisms for healthcare facilities (including accreditation of laboratories and diagnostic facilities) are in place. Existing Accreditation system of hospitals; the National Accreditation Board for Hospitals and Healthcare Providers (NABH) is pertinent and provides enough flexibility. Insurance Regulatory Development Authority (IRDA) has issued a notification for the health entities to consider NABH Entry level accreditation for availing reimbursement benefits from the insurance providers.
- The public institutions are not currently actively involved in NABH Accreditation. Many of the public institutions which have enrolled into NABH/NABH Safe I/NABH Entry level have challenges to upgrade themselves to the desired standards. Public Hospitals are undertaking accreditation against National Quality Assurance Standards (NQAS) developed by MoHFW.

1.7.2 Adverse Events and Surveillance Systems

- Mechanisms of assessing the overall burden of unsafe care in the country exist for some programmes, such as Adverse Events Following Immunization (AEFI), Pharmacovigilance Program of India (PVPI), etc. but not for all.
- A patient safety incident surveillance and a system of reporting and learning from all adverse events and “near misses” at national and sub-national levels exist for certain events like needlestick injuries, AEFI, Pharmacovigilance, Haemovigilance, Death audits etc. but not for all.

1.7.3 Health Workforce

- Registration and re-registration, certification, and re-certification as well as continuous professional education of health care professionals are available for three different categories of health care workers.
- It is difficult to estimate the adequate number of appropriately trained and skilled staff in patient safety currently in position. Multiple trainings take place within the frames of different programs and projects, at different levels of governance (central and state) and health care (from primary through tertiary) and in many cases they are not well documented.
- Periodic assessments of awareness and understanding of basic patient safety principles and practices among different categories of healthcare workers is not done in public sector hospitals. Information about the same from the private sector is also not available.

- Whereas patient safety as a separate topic may not be available in different curricula, overall concept as well as many elements of patient safety are reflected across different syllabuses, including undergraduate, postgraduate and continuous medical education.
- Standard Treatment Guidelines and protocols are available within the most important vertical national programs (TB, Vector Borne Diseases (VBD), HIV/AIDS, Maternal and Child Health (MCH), etc.). Under CEA, the STGs for 215 medical conditions under 21 specialties have been prescribed.
- Under Indian Public Health System, there are elements of patient safety in general and infection control in particular.

1.7.4 Prevention and Control of HAI

- Institute based systems for infection controls have been developed, but there is lack of integrated national level program, policy or guidelines which cover health care institution at all levels.
- There is no system of reporting HAI at any level and there is no authority in place to collect, analyse and report HAI at country level.
- Biomedical Waste Management Rules were first notified in 1998. These rules have been revised comprehensively recently in 2016 & 2018 (Amendment). These rules have helped in regulating management of biomedical waste by health care institutions.
- National Guidelines on Clean Hospitals (Swacchta Guidelines) were released in 2014. Government of India (GoI) has launched Kayakalp programme to improve general cleanliness and hygiene, infection control and waste management practices in public hospitals.
- NCDC and ICMR have created a network of laboratories for Antimicrobial Resistance surveillance in the country. Many private sector chain hospitals and autonomous institutes also have their own Infection control systems.
- A concise interim guideline on infection control has been uploaded on NCDC website as a ready reference for the hospitals to start implementing infection control practices in their setting. National infection control programme has been drafted and is in the process of finalization. ICMR has also issued Infection Control Guidelines. There are other guidelines available, developed by institutions/ under various programs, e.g. RMNCH, Hospital Manual by DGHS, NACO manual.
- NABH has a system of surveillance for HAI but limited to NABH accredited hospitals only. There is also software to track hospital associated infection reports by the All India Institute of Medical Sciences (AIIMS) Trauma Centre.
- An expert group by the PMO office had given national recommendations which have been discussed at a high level in the Ministry of Health with all the central government hospitals for the implementation of sterilization practices.
- In the RMNCH programme, infection management and environmental plan was introduced in 2007 and implemented countrywide. Similarly, in the event of outbreaks, the respective guidelines for infection prevention and control

are being issued. At the DGHS level, a hospital manual with elements of infection control has been implemented in the central public hospitals.

- Hospital Infection Control Committee are mandatory in accreditation programme/s. The key stakeholders involved in the Committee could be the head of facility (administrator/manager), representative of a nursing staff, key clinicians, lab specialist/microbiologist, biomedical engineer with clear roles and responsibilities (e.g., biomedical engineer is responsible for building construction and maintenance, which is also key element in infection prevention and control).
- Currently only 192 combined Biomedical Waste Treatment Facilities (CBMWTF) exist in the country against 500 to 600 needed.

1.7.5 Patient Safety in Different Programs

- Round the clock Basic Emergency Obstetric and Newborn Care (BEmONC) and Comprehensive Emergency Obstetric and Newborn Care (CEmONC) services up to Community Health Centre (CHC) level are available in most of the states.
- Multiple guidelines for even up to Primary Health Centre (PHC) level are available; Janani Suraksha Yojana, Janani Shishu Suraksha Karyakaram, Integrated Management Neonatal Childhood Illnesses, Sick Newborn Care Units, Indian Public Health Standards, BEmONC, CEmONC, SBA.
- Safe Injection Guidelines by Indian Academy of Paediatrics and National Centre for Disease Control were released and are available online. The new Policy Guidance by WHO, issued in 2015, on Safe Injections is also available.
- Ensuring all health care providers are vaccinated against Hepatitis B and waste handlers against tetanus is crucial to ensure safety from occupational hazards of health care providers. Availability of Post-Exposure Prophylaxis (PEP) for needle stick injuries at all causalities or emergency rooms/ Operation Theatres (OTs) and other intervention sites are a big missing area.
- Since frontline health workers such as ASHAs and other village level volunteers are actively involved diagnostic practices such as conducting rapid diagnostic tests (e.g. for malaria) through finger pricking etc. therefore, BMW practices should reach the frontline health workers to ensure their safety as well as patient safety.
- Essential Drug List is available and is being used by the government institutions. High-Quality control by DCGI at manufacturing level is available.
- Medical colleges collect data related to adverse drug reactions. National Portal to register instances of spurious drugs is available.
- Blood is defined as a “drug” under the Drugs and Cosmetics Act and Rules thereof, and therefore blood banks are considered manufacturing units and can only function under a license issued by the State Food and Drug Administration (FDA) with approval of DCGI.
- All units of blood collected in the licensed Blood Banks undergo mandatory screening for human immunodeficiency virus (HIV), hepatitis B virus (HBV),

hepatitis C virus (HCV), Malaria and Syphilis before being issued for transfusion.

- National Blood Transfusion Council provides policy directions to all the licensed Blood Banks through respective State Blood Transfusion Councils.
- All blood banks report to NACO/National Blood Transfusion Council (NBTC) through a Strategic Information Management System (SIMS) Also, a web- cum-mobile application had been created on the National Health Portal, which helps to locate the nearby blood banks, available blood groups, and units of blood available.
- DGCI has a few national medical device regulatory and monitoring programmes, but to a very limited extent.
- Though much has not been done on medical device safety in India, a Health Technology Assessment Division exists in NHSRC and was recently designated as a WHO Collaborating Centre.
- Safer medical devices as per Good Manufacturing Practices (GMP) and WHO standards for infection control and patient safety exist.
- Comprehensive legislation in the form of the Transplant of Human Organs Act (THOA), National Organ Transplant Program (NOTP), National Organ and Tissue Transplant Organization (NOTTO), different SOPs, including for selection and safety of donors; allocation policies, IEC, national registries are available.

1.8 RELATIONSHIP BETWEEN WORKER SAFETY AND PATIENT SAFETY

Worker health and safety is directly linked to patient outcomes. Healthcare workers have a high risk of workplace injuries and more mental health problems than most other occupational groups. Many healthcare professionals feel fatigued, stressed, in pain, or at risk of illness or injury. These impede their ability to provide consistent quality care. Studies have shown that in hospitals with low turnover, health care workers report a healthier workplace with less work stress. A healthy workplace is defined as one in which health care workers are able to deliver higher quality care, and worker health and safety and patient health and safety are mutually supportive An important part of promoting patient safety must therefore focus on how to promote a healthy healthcare workplace.

1.9 WAYS TO IMPROVE SAFETY OF HEALTH CARE WORKERS

Both the employer and the employee have responsibility to keep the workforce safe. For example, while management provides personal protective equipment (PPE), such as safety glasses to keep debris and chemical splashes away from the eyes, it is the employee's responsibility to wear the PPE when performing work that management has identified as requiring it. More generally, it is the responsibility of management to prepare detailed work instructions that clearly describe how work should be performed in order to prevent quality and safety failures; the employee is responsible for following these procedures.

In addition, management is responsible for providing a safe workplace where, for example, employees can safely leave the work area in case of fire or quickly locate an eyewash station to rinse their eyes in case of a splash with a corrosive liquid.

1.9.1 A Lean Approach

Before rushing to solve problems, Lean process improvement teams take time to fully understand them. Similarly, work on the analysis phase of projects to reduce staff injury begins by surveying those who do the work (the entire staff, not just the staff members on the team) regarding how they are injured. It is important to recognize conditions that lead to injury, such as a wet floor leading to slips and falls. But as, or even more, important is understanding behavior. It is vital to ask correct and specific questions. These questions should be asked to the staff who suffered the injury. Only by asking specific questions and looking for answers the root cause of any injury be found out. After a thorough enquiry the cause is found out and remedial measures can be put in place so that the injury is not repeated to not only who suffered but also others.

1.9.2 Job Safety Analysis

Deep analysis of different steps of a job helps in finding out the potential hazards associated with the job. The hazardous steps can thus be modified so that the injury does not occur while performing it. The worker doing the work become more alert while performing the step and takes appropriate measures to mitigate it.

1.9.3 Managing the Work

The next step after identifying the hazards and tackling them is reviewing the protocols regularly. Quality improvement and patient safety is not a one-time activity. This should be reviewed regularly. The frequency of review depends upon the policy of the organization. Ideally the safety team of the hospital should meet every month and discuss the safety issues in detail. This will surely help in decreasing the accidents in the hospital.

1.9.4 Safety Committee

Healthcare organizations can encourage better employee engagement in safety initiatives by forming a Safety Committee. The committee should include front-line caregivers as well as members of the management team. The purpose of the safety committee is to “review all incidents and ensure that root causes have been found and that corrective actions have been taken.” Committee should meet regularly.

The committee can devise a check list or performance score card wherein most of the aspects of safety is written. The score card should be filled regularly. The comparison between the employees can be made. Moreover the performance of an employee can be tracked by keeping records of his performance scorecard.

1.9.5 Refresher Training

The hospital staff should be thoroughly trained in safety procedures. The refresher training should be arranged periodically like annually. The training should include these topics:

- Injury and illness prevention
- Patient handling and ergonomics
- Security and workplace violence prevention
- Infection prevention and control
- Emergency response for fire and natural disasters
- Hazardous materials and chemical safety
- Equipment safety

Table 1.1: Examples of Controls in Worker and Patient Safety

Control	Worker Safety Examples	Patient Safety Examples	Both Workers and Patients
Elimination	Immunization against Hepatitis B	Designing tubing connections so they cannot fit other ports	Removal of latex-based products to prevent sensitization and allergic reactions
Engineering controls	Ventilated cabinets for compounding of chemotherapy drugs in pharmacy, safety engineered sharp devices, blunt suture needles, patient lifting equipment; MRI control rooms	Bar-coded patient identification bands for medication administration systems; “smart pumps” for intravenous infusions; RFID sponge counters technology	Isolation rooms with negative pressure ventilation to reduce transmission of airborne pathogens; separated decontamination units
Administrative and or organizational controls	Staffing levels, staff rotation, standard or contact precautions, training	Checklists for central line insertions; time-out prior to surgery; competency testing, daily huddles; pharmacy rounds	Customize staffing mix and level based on patient/resident acuity or needs; monitor hand hygiene
Personal Protective Equipment and individual level behaviors, responses	Gloves, goggles, respirators, masks, hand hygiene; Hepatitis B and related immunizations	Hand hygiene, gowns, gloves, masks, immunization	Influenza immunization; tuberculosis infection testing
Substitution	Digital imaging instead of wet chemicals; microfiber mops instead of conventional mops	Substituting bottles of concentrated potassium chloride on nursing units with premeasured unit dose vials	Slip-resistant floors; changing from germicide spray solutions to wipes to reduce aerosolized respiratory irritants

1.10 NATIONAL PATIENT SAFETY IMPLEMENTATION FRAMEWORK (2018-2025)

The goal of the NPSIF is to improve patient safety at all levels of health care across all modalities of health care provision, including prevention, diagnosis, treatment and follow up within overall context of improving quality of care and progressing towards universal health coverage in coming decade. NPSIF applies to national and sub-national levels as well as to public and private sectors. Being a cross-cutting concept by nature, the scope of patient safety applies to all national programmes and envisages collaboration of wide range of national international stakeholders both within and outside health sector.

Strategic Objectives of NPSIF

Six strategic objectives of NPSIF are:

1. To improve structural systems to support quality and efficiency of healthcare and place patient safety at the core at national, subnational and healthcare facility levels.
2. To assess the nature and scale of adverse events in healthcare and establish a system of reporting and learning.
3. To ensure a competent and capable workforce that is aware and sensitive to patient safety.
4. To prevent and control health-care associated infections.
5. To implement and strengthening global patient safety campaigns across all programmes.
6. To strengthen capacity for and promote patient safety research.

Box 1.1: Reasons for a gap between a safe, engaged workforce and excellent customer care in health care setting

1. Workplace health and safety is not widely understood or addressed as a strategic priority by health care boards of directors, leadership and management.
2. There is limited sustained leadership commitment and allocation of adequate health and safety resources.
3. Health and safety resources are not aligned with the corporate planning and budgeting cycle.
4. Health care has a well-entrenched, hierarchical and tradition-bound professional and organizational culture.
5. There is fragmented accountability and inadequate communication of health and safety matters in health care settings.
6. There is an absence of comprehensive corporate analysis to identify, monitor, mitigate and manage health and safety risks.
7. The health care workplace has complex, trained groups of professionals who have had different training and who are used to working independently and in silos.
8. There is limited cross-enterprise communication on solution management.

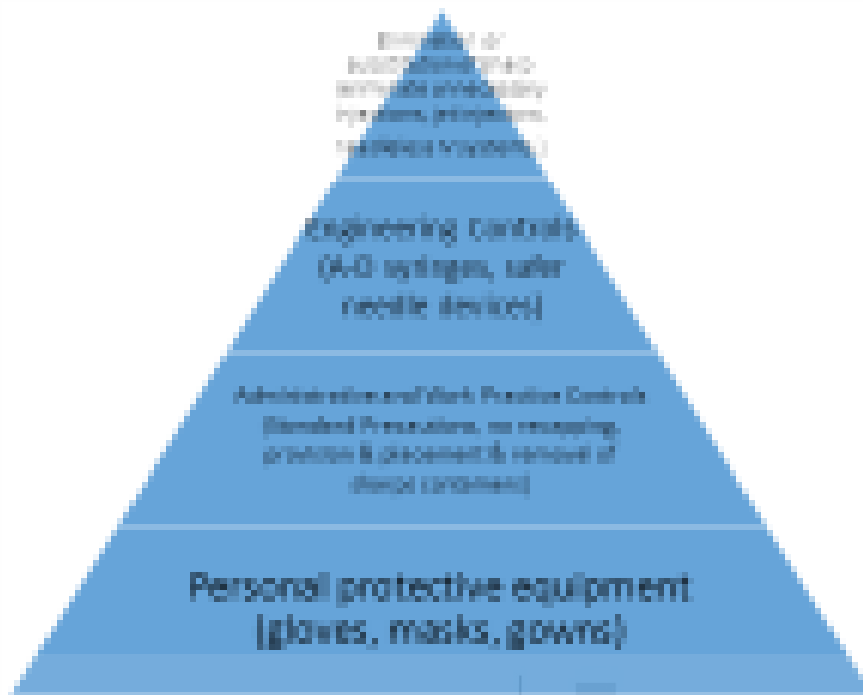


Fig. 1.1: Occupational health hierarchy of controls (In order from most to least effective)

1.11 KEY WORDS

Culture of safety: Characterized by open and respectful communication among all members of the health care team in order to provide safe patient care.

Hazard: A source of risk that does not necessarily imply potential for occurrence. A hazard produces risk only if an exposure pathway exists and if exposures create the possibility of adverse consequences.

Health care-associated infection (HAI) : An infection acquired concomitantly by an individual who is receiving or who has received care, treatment, or services from a health care organization. The infection may or may not have resulted from the care, treatment, or services.

Near miss: Any process variation that did not affect an outcome but for which a recurrence carries a significant chance of a serious adverse outcome.

Personal protective equipment (PPE): Devices worn by a health care worker to protect against hazards in the environment. Examples include respirators, gloves, and hearing protectors.

1.12 LET US SUM UP

Workplace safety is the responsibility of everyone. Health care setting is the place where even minor error can produce fatal results. It is the duty of health care administrators to formulate policies and write down regulations regarding workers' and patients' safety. There should be a committee looking after only the safety issues in the hospital. There should prevail a culture in the organization where it should have belief that all accidents are preventable and everyone plays a role in its prevention. Having a robust policy on the safety is the first step

in preventing injuries. The policy or guidelines should be reviewed regularly. The safety committee should meet frequently and find new ways to reduce injuries. Ultimately the goal of zero injury to both patients and workers will be achieved.

1.13 ANSWERS OF CHECK YOUR PROGRESS

Check Your Progress 1

1. Patient safety is the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum.
2. The National Quality Forum (NQF) is a not-for-profit, nonpartisan, membership-based organization that works to catalyze improvements in healthcare.

Check Your Progress 2

1. 50
2. Third

Check Your Progress 3

A sentinel event as defined by American healthcare accreditation organization, The Joint Commission (TJC), is any unanticipated event in a healthcare setting resulting in death or serious physical or psychological injury to a patient or patients, not related to the natural course of the patient's illness. Sentinel events specifically include loss of a limb or gross motor function, and any event for which a recurrence would carry a risk of a serious adverse outcome. Sentinel events are identified under TJC accreditation policies to help aid in root cause analysis and to assist in development of preventative measures.

1.14 REFERENCES AND SUGGESTED FURTHER READINGS

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LINK TO YOUTUBE VIDEOS

<https://www.youtube.com/watch?v=0CVkEpXp7ho>

