



iGEM IIT Roorkee

Medical Staff Survey Analysis



Survey 2

Hospital-acquired infections (HAIs) are infections acquired while receiving treatment for other conditions within a hospital facility. Healthcare workers (HCWs) are at increased risk of hospital-acquired infections transmitted from both pathogens. Our survey aimed to assess the knowledge, attitude, and practice of health care professionals and establish the evidence that hospital infection is a common and serious problem throughout the world.

Patient care is provided in facilities that range from highly equipped clinics and technologically advanced university hospitals to front-line units with only basic facilities. Despite progress in public health and hospital care, infections continue to develop in hospitalized patients and may also affect hospital staff. Many factors promote disease among hospitalized patients:

- Decreased immunity among patients.
- The increasing variety of medical procedures and invasive techniques creating potential routes of infection.
- The transmission of drug-resistant bacteria among crowded hospital populations, where poor infection control practices may facilitate transmission.

We conducted a cross-sectional study of 113 health care personnel (staff nurses, nursing students, lab technicians, OT assistants, ward girls, and sweepers). Data was collected using a self-administered questionnaire and was then analyzed.

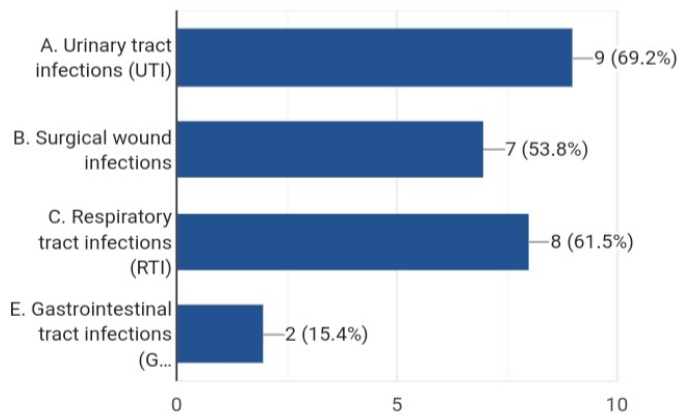
Results & Charts:

Effective infection prevention and control strategies require reliable data describing the epidemiology of hospital-acquired infections (HAIs), which is currently lacking in India. This study's objective was to evaluate the prevalence, types, and risk factors associated with HAIs in acute care hospitals in India.

Team iGEM IIT Roorkee conducted a pilot point-prevalence survey between September and October 2020. We targeted Doctors, Nurses, and hospital staff for getting untampered data.

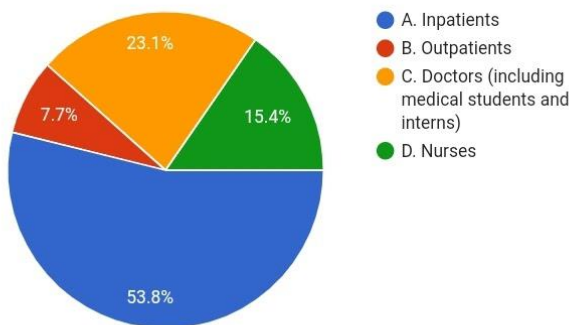
Out of 113 surveyed responses, (80%) of the respondents were aware of the HAIs. Multiple studies indicate that the common types of adverse events affecting hospitalized patients are adverse drug events, HAIs, and surgical complications.

Which of the following HCAs are commonly seen in your hospital?



We observed that Urinary tract infections (69%) and Respiratory tract infection (62%) were most commonly seen in the hospitals, followed by surgical wound infection (53.8%).

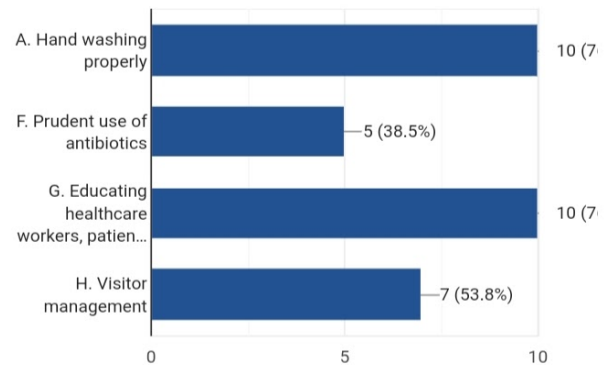
Which population is the most susceptible to HCAs?



The importance of preventing HAI by giving priority to the most susceptible populations, be it patients, inside the hospitals or the doctors who are treating them. The most vulnerable were inpatients (53.9%) and then followed by medical staff.

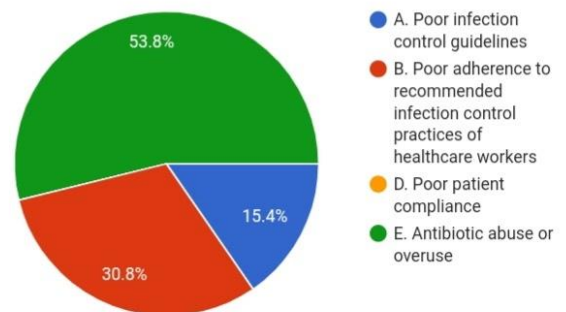
We wanted to check the preliminary basis of how hospitals prevent HAIs by taking small-scale actions like hand washing, Visitors Management, and Antibiotic usage. Washing hands (70%) and educating healthcare workers were the most effective methods to prevent HAIs.

Which is the single most effective method to prevent HCAs? (select all the possible options)



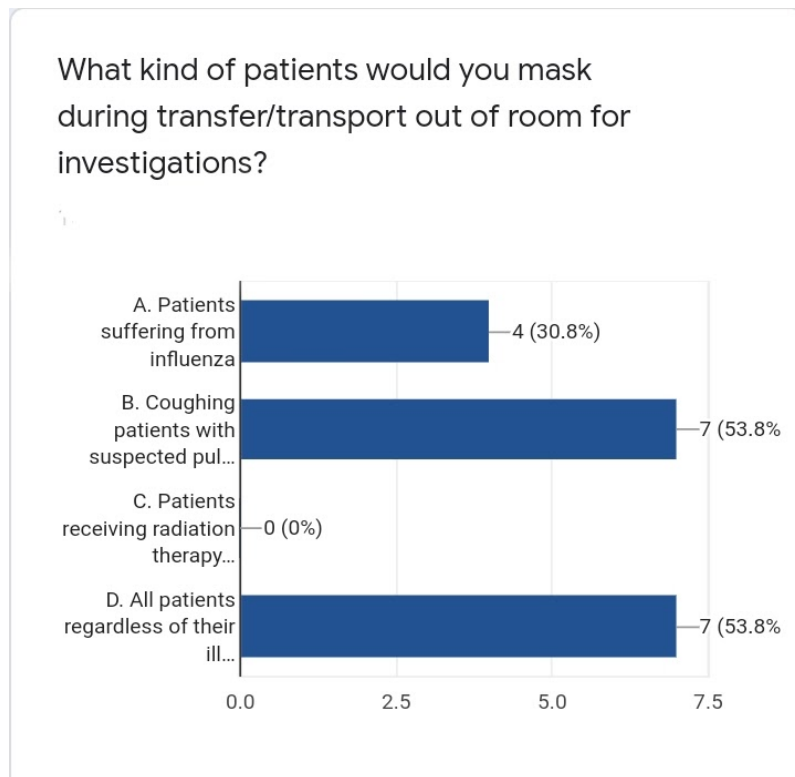
Effect on MDRO infection and colonization rates have not been reported; logically, decreasing these and other healthcare-associated diseases will, in turn, reduce antimicrobial use and decrease opportunities for emergence and transmission of MDROs. Poor patient compliance (53.8%) is one such factor that is closely associated with the emergence of multidrug-resistant organisms MDROs.

Which of the following is/are closely associated with the emergence of multidrug resistant organisms (MDROs)?



Generally, all the patients are masked during transfer/transport out of room for investigations, so the patient's movement outside of the isolation room should be limited to medically essential purposes.

If being transported outside of the room, such as to radiology, health care personnel (HCP) in the receiving area should be notified in advance before transporting the patient.



In today's time, healthcare settings are busy, crowded, noisy places with overworked, distracted clinical staff and a wide assortment of patients converging together in situations prone to facilitating infectious disease exposures and transmission. With the current national nursing shortage, even staff that generally adhere to standard infection control policies and procedures find themselves cutting corners and

skipping critical steps because of perceived time constraints or inadequate staffing. The cornerstone of effectively managing contagious patients is early and accurate identification and diagnosis.

Conclusion:

From our survey, we got that knowledge about Hospital Acquired Infection is present among health care personnel. However, there is still a lack of adequate quality control practice to prevent these Infections. The patient is exposed to a variety of microorganisms during hospitalization. Contact between the patient and an organism only does not necessarily result in the development of the clinical disease. Other factors also influence the nature and frequency of nosocomial infections. The likelihood of exposure leading to infection depends partly on the microorganisms' characteristics, including resistance to antimicrobial agents, intrinsic virulence, and amount (inoculum) of infective material. Infection control responsibilities such as hospital management, the role of physicians, microbiologists, pharmacists, and nursing staff must be followed. According to the guidelines of WHO, a high frequency of nosocomial infections is evidence of the low quality of health service delivery and leads to avoidable costs. The importance of preventing Hospital Acquired Infection should be emphasized among health care personnel through intensive IEC activities.

Reference: <http://www.who.int/emc>