

Sanitation, Sterilization and Isolation of Hospital-Acquired Infection and its Prevention

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Perspective

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DESCRIPTION

An infection that is obtained in a hospital or other healthcare institution is referred to as a hospital-acquired infection, also known as a nosocomial infection. To demonstrate that it can occur in both hospital and non-hospital circumstances, it is also occasionally referred to as a healthcare-associated infection. A hospital, nursing home, rehabilitation centre, outpatient clinic, diagnostic lab, or other therapeutic setting may be the site of the acquisition of such an illness. In the clinical setting, infection is transmitted to the susceptible patient in a variety of ways. Along with contaminated tools, bed linens, or airborne droplets, healthcare workers also spread infection. The infection may have come from the outside environment, another sick patient, potentially infected employees, or in some circumstances, it may not be possible to identify the virus's source. Sometimes the microorganism comes from the patient's own skin microbiota and becomes opportunistic as a result of surgery or other treatments that undermine the skin's barrier of defence.

Prevention

The Maryland Hospital-Acquired Conditions Program, which imposes financial rewards and sanctions on specific hospitals, was put in place by the state of Maryland to help lower the number of hospital-acquired infections. The Centers for Medicare and Medicaid Services payment policy has changed to penalise underperforming hospitals by taking away up to 3% of their inpatient payments, while rewarding hospitals that are successful in decreasing hospital-acquired infections with bonuses of up to 3%.

Sanitation

Regarding uniforms, equipment sterilization, cleaning, and other preventive measures, hospitals have sanitation guidelines. One of the best strategies to prevent nosocomial infections is for all medical staff to thoroughly wash their hands before and after each patient interaction and/or to rub their hands in alcohol. Antimicrobial medicines like antibiotics should be used more carefully, which is equally important. Because a breach of these protocols frequently results in hospital-acquired infections from bacteria like methicillin-resistant *Staphylococcus aureus*, methicillin-susceptible *Staphylococcus aureus*, and *Clostridium difficile*, affected patients frequently file medical malpractice lawsuits against the hospital.

Sanitizing surfaces is one of the controls used to lower nosocomial infections in medical facilities. Methicillin-resistant *Staphylococcus aureus*, influenza, and gastroenteritis have all been successfully treated using modern sanitising techniques such as Non-flammable Alcohol Vapor in Carbon Dioxide systems. Clinical studies have demonstrated that using hydrogen peroxide vapour lowers the risk of illness and infection rates. Alcohol has been demonstrated to be useless against endospore-forming bacteria like *Clostridium difficile*, whereas hydrogen peroxide is. After discharge, patients with methicillin-resistant *Staphylococcus aureus* or *Clostridium difficile* infections may additionally have their rooms cleaned with ultraviolet cleaning equipment.

Patients cannot be completely isolated from infectious agents despite cleaning procedures. In addition, doctors frequently prescribe antibiotics and other antimicrobial medications to patients to help them recover from illness; this may put more selection pressure on resistant strains of bacteria to emerge.

Sterilization

Sanitizing is only the first step in sterilisation. By exposing all microorganisms on tools and surfaces to chemicals, ionising radiation, dry heat, or steam under pressure, it eliminates them completely.

Isolation

Implementing isolation measures is one way to stop the spread of germs through typical channels in healthcare facilities. Because agent and host factors are more challenging to manage, efforts to stop the spread of microorganisms focus mostly on isolation of infectious cases in designated hospitals, patients with infected wounds in designated rooms, and recipients of joint transplants in designated rooms.

CONCLUSION

The patient may have acquired the infection through their own skin, it is still regarded as nosocomial because it occurs in a medical facility. The term can be simply understood as meaning that the infection usually shows no signs of being incubating or present when the patient entered the healthcare facility, indicating that it was acquired after admission. In the clinical setting, infection is transmitted to the susceptible patient in a variety of ways. The main objectives of sanitation are to safeguard natural resources (such as soil and surface water), ensure that everyone can live in a healthy environment, and to ensure the safety, security, and dignity of individuals who urinate or defecate.