

Management and Control of Nosocomial Infections in Hospitals



Hospital Management

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ABSTRACT

Nosocomial infections also known as hospital acquired infections are defined as infections which are acquired by a patient during the time spent in the hospital or as a result of hospitalization (after three days of admission). It can be caused by bacteria, viruses, or parasites. Infections may originate from endogenous or exogenous resources i.e. direct contact (from person to person transmission between infected patients), indirect transmission (through equipments, bed-clothes, hospital procedures etc.), transmission through air and faeco oral transmission is also common in hospitals. Nosocomial infections are becoming huge problem for hospitals these days. They used to prolong patient stay in hospitals and when cases get worst causes permanent disability and sometimes even death. To make improvements in the quality of care for patients' rules and regulations should be properly followed and implemented by hospitals. The most common types of hospital acquired infections are: Urinary tract infections, Respiratory tract infections, Surgical wound infections, Blood infections, Skin infections. Nosocomial infection occurs at higher rates in young patients and older adults. Also, with the increased use of invasive procedures patients are acquiring more nosocomial infections.

Nosocomial Infections:

Nosocomial infections, besides morbidity and mortality prolongs the hospital stay of patients, increases bed occupancy rate, also increases expenses to patient as well as hospital and thereby puts undue pressure on the resources of hospital who are already strained. It is therefore necessary that an effective on-going programme of surveillance and control of hospital acquired infection is implemented in every hospital. And an infection control committee who will supervise the implementation of all rules and regulations which have been programmed for every department of hospital. So, it is the duty of hospital authorities, doctors and staff members to take care of the negligence occurred during treatment of patients.

Prevention of nosocomial infection:

There are some standard precautions designed to protect healthcare workers and patients from the risk of infections. And they are applied to all types of patients regardless of their diagnosis. Blood, body fluids, excretions, and secretions should be treated as potentially infectious. Following are the precautions which should be taken:

• Hand Hygiene:

The simple act of hand washing is the single most important practice for preventing infection.

When you should clean your hands?

- ✓ Before and after touching patients
- ✓ Before donning sterile gloves when inserting central lines, urinary catheters, peripheral IV's or other invasive devices that do not require a surgical procedure.
- ✓ After contact with patient's skin or body fluids or excretions, mucous membranes, and wound dressings.
- ✓ After moving from a contaminated body site to a clean body site during patient care.
- ✓ After removing gloves.

• Barrier Precautions:

These are designed to protect from exposure to infectious material and reduce the risk of transmission of micro-organisms to patients. They are also known as Personal Protective Equipment (PPE) :

- ✓ Gloves
- ✓ Gowns/Plastic apron
- ✓ Protective eye wear/eye shields
- ✓ Masks
- ✓ Respiratory masks
- ✓ Caps

• Waste Management:

All clinical waste produced in hospitals carries potentially pathogenic micro-organisms. Precautions to be kept in mind are:

- ✓ When handling clinical waste wear protective gloves.
- ✓ Dispose of any clinical waste in a designated blue, yellow, red or black plastic bag immediately on completion of the procedure or task.
- ✓ Proper segregation of clinical waste is also very important.

• Cleaning of Equipment:

The environment and equipment attract dust unless cleaned; these become a potential breeding place for pathogens. If equipments may not get decontaminated between uses of patient care they may become a source of infection for another patient. Any cracks, crevices, and uneven surfaces with jagged edges also attract dust and moisture and are likely to be contaminated with bugs. They can grow merrily in the soap solutions if proper care is not ensured. So equipments used for any procedure should be cleaned of properly.

• Management of Exposure:

Often direct patient contact and care practices can pose a risk of exposure to certain infections and conditions, which need to be, follow up.

On occasions you yourself may pose a risk of infection if you:

- ✓ Have symptoms relating to an infection.
- ✓ Are suffering from certain infections (like severe acute respiratory syndrome, pulmonary tuberculosis, chicken pox etc.)
- ✓ Are exposed to an infection outside of the work place which can be transmitted to patients or other staff members.

So it is vital those instances are reported to the nursing supervisor and to the infection control personnel.

Hospital Infection Control Programme:

- Monthly staff training sessions on infection control.
- Frequent assessment of staff's knowledge regarding infection control and how infection spreads.
- Regular meetings between ward incharges and infection control nurse.
- Maintenance of registers (i.e. records regarding sterilization activities, linen, housekeeping etc.)
- Detection of hospital acquired infections.
- Accurate data collection and statistics on incidence of hospital acquired infections.
- Reporting and documentation of needle stick injuries

among staff and the appropriate protocol to be followed.

- Motivational activities for staff.
- Involvement of staff in overall maintenance of optimum standards of infection control.

Recommendation:

For improving the management and control of nosocomial infections hospitals should:

- Ensure that there is appropriate feedback of surveillance data to clinicians and infection control committee so that they should be encouraged to take steps for control of hospital infections.
- Education programmes should be planned time to time (i.e. hand washing, gloves, gowns etc.) for health workers. Immunisation of health workers who are at risk is also very necessary.
- High risk patients should be kept isolated to prevent infections. Antibiotic prophylaxis in high risk postoperative patients, burn patients and neutropenic patients should be given on time.
- Use of methods to prevent cross-contamination and to control various sources of nosocomial pathogens that could be transmitted from patient to patient or from personnel to patient. Proper disinfection and care of catheters, respiratory equipments, humidifiers, endotracheal tubes, and dialysis systems is also very important.

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