

HOSPITAL ACQUIRED (NOSOCOMIAL) INFECTION

Policies

MRSA Policy
Meningitis Policy
Blood and body fluid Exposure Policy
Disinfection Policy
Glove Policy
Tuberculosis Policy
Isolation Policy

DEFINITION:

ANY INFECTION ACQUIRED BY A PATIENT IN HOSPITAL 72 hours AFTER ADMISSION IS CONSIDRED TO BE “HOSPITAL ACQUIRED” RATHER THAN “COMMUNITY ACQUIRED”.

SOME STATISTICS:

- *Affects approx. 10% of all in-patients (10-20% develop symptoms post discharge).*
- *Delays discharge by average of 11 days
costs an average of £3000 (upto £9000) per episode.*
- *HAI costs 2.8 times no infection.*
- *Estimated cost of £1,000 million per year to NHS*
- *Longer waiting lists.*
- *More Nursing time and Energy is required, especially if isolation precautions are required.*

Socio-economic burden of HAI (1999)

“UNCLASSIFIED” STATISTICS:

Nosocomial Infections have an impact on

- *Discomfort and Pain.*
 - *Prolonged hospital stay.*
 - *Deterioration of patient status.*
 - *Direct cause of 5,000 deaths per year*

Socio-economic burden of HAI (1999)

SIZE OF THE PROBLEM

1 in 10 of hospitalised patients

1. *Urinary Tract Infection 30-40%*
2. *Surgical Wound Infection 17-19%*
3. *Lower Resp Tract Infection 16-18%*
4. *Skin and Soft Tissue Infection 6%*
5. *Bacteraemia 8%*

Why do Nosocomial Infections Arise?

- *Lowered Immunity. Most Patients Have a reduced Immunity to infection*
- *Overcrowding*
- *Inadequate Facilities*
- *Poor design and Planning of Hospitals*
- *Under-Staffing which can result in Breakdown of Procedure and to Short Cuts.*
- *Increased in Both Number and Types of hospital workers who are not Aware of the Importance of Infection Control*
- *A False Sense of Security about the effectiveness of antibiotics with the corresponding neglect of Aseptic Techniques.*
- *Admissions of Carriers for Unrelated Medical Conditions (e.g. MRSA carrier admitted to ITU) OR (e.g. Salmonella carrier admitted to a Surgical Ward)*
- *Transfer to or from Specialized Hospitals or units with a high usage of Antibiotics (e.g. ITU Patients or Oncology Patients). Such Patients carry Bacteria that are often resistant to antibiotics that combat infection.*
- *Referred from other Hospitals where there may be Endemic Problems*

SOURCES:

*1. Patients own flora - Endogenous
Auto-Infection*

2. Environment - Exogenous

3. Another Patient/Staff - Cross Infection

Principles of Infection Control

■ 1) *Eradication of Potential sources / reservoirs of infection.*

⇒ *Isolation Precautions of Infected Patients.*

⇒ *Staff infections and Injuries should be reported.*

⇒ *Sterilization and Disinfection of sites and surfaces.*

■ 2) *To block whereby Organisms are Transferred to Patient.*

⇒ *Portal of entry --}Universal Precautions*

⇒ *Portal of exit ----}Mode of transmission.*

Examples: Respiratory → Nose and Mouth.

Alimentary → Mouth (entry) and Faecal Route (Exit).

■ 3) *Enhancing Patients resistance to Infection.*

⇒ *Increased Personal Hygiene.*

⇒ *Balanced Diet.*

⇒ *Antibiotic Prophylaxis and Treatment.*

■ 4) *Training of Hospital Staff*

⇒ *Awareness of Hospital Policies (contents).*

⇒ *Awareness of Infection Control Principles.*

RESPIRATORY TRACT INFECTIONS

33% Associated with a surgical procedure

3% of surgical patients infected.

DEFINITION

Purulent sputum

Localised chest signs:-

Examination

CXR

Fever

↓Lung Function

(Microbiology)

BACTERAEMIA

ASSOCIATED WITH

*I.V. Cannulation Venflon CVC Pacemakers
Arterial lines
2° to infection elsewhere
U.T.I.
Pneumonia
Wound infection*

INFECTION CONTROL

Infection Control Team

*Infection Control Doctor (Microbiologist)
Infection Control Nurse*

Infection Control Committee

*Admin CSSD
Engineers OHD
Domestics Pharmacy
Nursing Medicine
Surgery*

Responsible for:

- *Infection Control Policies*
- *Monitoring infection problems*
- *Rates*
- *Recommendations to others*
- *Surveillance*

H.A.I. IS INCREASING:

- *compromised patients*
 - *ward and inter-hospital transfers*
 - *antibiotic resistance (MRSA, VRE, resistant Gram negatives)*
 - *increasing workload*
 - *staff pressures*
 - *lack of facilities*
 - *? lack of concern*
- HAI is inevitable but some is preventable (irreducible minimum)*
- *realistically reducible by 10-30%*

GENERAL PRINCIPLES

Good general ward hygiene:

- *No overcrowding*
- *Good ventilation*
- *Regular removal of dust*
- *Wound dressing early in day*
- *Disposable equipment*

HAND WASHING

*Probably most important -
After patient contact
before invasive procedures*

PREVENTING CROSS INFECTION

If known or suspected on admission to hospital, or detected following admission:

- *Isolation (barrier precautions)*
- *Inform Infection Control team*
- *Treatment - if appropriate*
- *Regular surveillance*

METHODS OF CONTROL:

often simple:

- *handwashing*
- *cleaning*
- *audit*
- *surveillance with timely, accurate information and feedback on rates and trends*
- ***EDUCATION, EDUCATION, EDUCATION!***