Presentation of Prevention and Monitoring HAI (HIC 4/CQI 3G)

(BASED ON FULL ACCREDIATION STANDARDS)

Reviewed by:
Dr. Lallu Joseph
Secretary General
CAHO

Faculty:
Dr. Vijay Agarwal
Dr. Suneel C Mundkur
Mr. Vinod Kumar
Ms. Niyati Maun
Dr. Jeet Patwari
Dr. Joseph Fidelis

CQIPH ADVANCE 23-26 TH SHILLOM , SHILLONG

PRESENTED BY : GROUP-3

S.No	Name
1	SACHIN KALE
2	G.B.KULKARNI
3	PREM KIRAN NATH
4	PARIVALAVAN RAJAVELU
5	SWAPNIL JAIN

HOSPITAL ACQUIRED INFECTION - HAI

- ALSO KNOWN AS NOSOCOMIAL INFECTION

- **Nosocomial Infection—**An infection contracted by a patient or staff member while in a hospital or health care facility (and not present or incubating on admission)
- Occurs after 48 hrs of admission

Carriers of HAI

- Health care staff can spread infections
- Contaminated Equipment
- Bed Linens
- Air Droplets
- Hospital environment and Visitors
- Another Infected Patient
- Patients own skin Micro biota

Surveillance of healthcare Associated Infections

- Surveillance is one of the most important components of an effective infection control programme

- It is defined as the Systematic collection ,analysis, interpretation and dissemination of data about the occurrence of HCAIs in a definite patient population.

Infection Control Practices in Hospitals

- Functional Infection Control Team
- Individual HCW
  - Hand Hygiene
  - Wearing of Personal Protective Equipment's (PPE)
  - Vaccination
- Processes
  - Autoclaving and Sterilization
  - Washing and Disinfection
  - Environmental cleanliness
  - Isolation/barrier nursing
  - Proper Formulated Antibiotic Policy

Hospital Infection Control Committee Responsibilities

- Formulate Infection Control Team
- Policies and Procedures Targeting areas :
  - A) High Risk areas
  - B) Reuse Policies
  - C) Safe Injection and infusion
  - D) Antibiotic Policy
  - E) Laundry and Linen Management
  - F) Kitchen Sanitation and food Handling
  - G) Engineering Controls
  - H) House Keeping Procedures
  - I) Surveillance

HAI-Prevention – auditing tools

No	Process	Measurement & Surveillance
1	Hand hygiene	WHO auditing tool
2	Vaccination	HR- records
3	Sterilising	Indicators-chemical/biological
4	Cleaning & Disinfection	Checklist/Indicators
5	Environmental cleanliness	Facility inspection

HAI Statistics

S.No	Type of infection	Formula	National Statistics	Remarks
1	CLABSI	No of Central Line associated blood stream infections in month/No of Central Line days in that month X 1000	2.79	
2	VAP	No of pneumonia in month/No of Ventilator days in that month X 1000	4.16	
3	CAUTI	No of Urinary Catheters in that month/No of Urinary catheter associated UTIS in that month X 1000	4.02	
4	SSI	No of surgical site infections in month/No of surgeries performed in that month X 1000	2.00	

Infections that may acquired during Patient stay in Hospital

- Catheter Related Blood Stream Infection (CRBSI)
- Ventilator Associated Pneumonia (VAP)
- Catheter Associated Urinary Track Infection (CAUTI)
- Surgical Site Infection (SSI)

Catheter Associated Urinary Tract

- Urinary Catheter Associated Infections are defined as an infection occurring 48 hours after insertion of a urinary catheter, signs and symptoms of infection (fever, pain, frequency, urgency, increased white count, etc.) and a positive urine culture of 100,000CFU/ml with no more than 2 species of bacteria.
- Commonest type of HCAIs

Prevention: CAUTI Bundle Check List

S.No	Details of Check List	Remarks
1	Treating Consultant to review the need of Urinary Cath	
2	Hand Hygiene Technique should be done prior to care	
3	Ensure Port and connected to the drainage system and secured	
4	Ensure patient are aware of UTI and perform routine care	
5	Use antiseptic for cleaning periurethral area and catheter	
6	Regular emptying Urinage drainage bags before 1/3 is full	
7	Drainage should be below the level of bladder and not touching floor	
8	Catheter & tubing's should be secured (bilateral) . After procedure remove apron and gloves perform Hand Hygiene	

Surgical Site Infections (SSI)

- Surgical site infections are defined as infections that occur within 30 days of surgery, unless an implant is inserted during the procedure then the time increases to 3 months.
- All reported SSI's are analyzed for preventability and reports are provided to the Infection Control Committee, Department of Surgery, Clinical Operations, Quality Board

Surgical Site Infection Prevention – Pre operative Checklist

- Identify and treat all infections remote to surgical site before elective operation
- Keep Preoperative stay as short as possible
- Don't remove hair preoperatively unless it interferes with operation if it has to be removed use Electrical Clippers
- Adequate control of Blood glucose levels for Diabetic patients
- Encourage Patients to shower or bath before at least the night before operative day

Surgical Site Infection Prevention – Intra Operative Check List

- Use an Appropriate agent for skin preparation
- Administer prophylactic antibiotic agent only when indicated within 30 mints of skin incision.
- Adhere to principle of asepsis when devices are used or administered drugs
- Sterilize all surgical instruments according to guidelines

Ventilator Associated Pneumonia (VAP)

- Ventilator Associated Pneumonia is defined as a lung infection occurring after a patient is placed on the ventilator. The diagnosis is confirmed by established Criteria

VAP Prevention- VAP Bundle Check List

- Perform Hand Hygiene Before Intubation Procedure
- Adhere to aseptic technique in the whole intubation procedure
- Use Maximum sterile barrier precaution
- Insert Endotracheal tube via oral route where there is no contraindication
- Place Patient in semi upright position between 30 to 45 degree to prevent aspiration
- Remove oral secretion before repositioning patient
- Develop a Surveillance system to study incident of VAP

VAP Bundle Check List

- Provide Daily oral care with Antiseptic Solution (Chlorohexidine)
- Maintain Proper Gastric Tube before feeding
- Perform Suction only when indicate using aseptic technique & use Single Use Suction Catheter
- Maintain suction pressure to avoid damaging respiratory mucosa
- Maintain Tracheal tube cuff pressure adequately to prevent leakage of secretion into lower airway
- Avoid unnecessary use of Prophylactic Antibiotics
- Avoid unnecessary use of stress Ulcer prophylaxis

CRBSI - definition

- Catheter-related bloodstream infection (CRBSI) is defined as the presence of bacteremia originating from an intravenous catheter.

Checklist to Prevent Central Line Associated Blood stream infection

- Site selection for insertion of central line
- Maximum sterile Barrier used during insertion of CL
- Hand Hygiene Compliance
- Daily Review of Line Necessity
- Use Sterile and Transparent Dressing Gauze
- Site Cleaning with Chloroxediene with or without alcohol
- Flushing with 0.9 % Normal Saline with Pre-filled Syringe all tubing

Checklist to Prevent Peripheral Line Infections

- Hand Hygiene prior to insertion
- Use of IV catheter insertion kits
- Use of Chlorhexidine/alcohol skin prep
- Use of Tegaderm dressings
- IV site and tubing to be changed every 96 hours ???
- Need for continuation of IV catheter evaluated on a daily basis

THANK YOU