CARE BUNDLES

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Introduction
The Care bundle is a new concept in critical care, which is currently being promoted by the national health service modernization agency for critical care. It has been originated in North American and are described as best groups of evidenced based practice intervention. The theory behind this bundle is that when several evidenced based interventions are grouped together in a single protocol, which will improve patient outcome. The bundle approach to deliver medical care has become popular in recent years. A care bundle is a group of intervention which when implemented will lead to a better outcome than performing intervention individually. It is a group of three to five evidenced based intervention, when performed together, will result in better outcome. It can be used to assure the minimum standards of care. They can be used as an audit tool to assess the delivery of intervention, but not to assess individual interventions.

Definition:
Care Bundles are simple sets of evidenced based practice that when implemented collectively, will improve the reliability of their delivery and patient outcomes.

Why Care bundles
- Reliable and consistent care system
- Have 3-5 elements which are clear and concise
- Promote multidisciplinary collaboration, consensus and endorsement
- Helps to provide best possible care for the patients who are undergoing treatment with inherited risks.

Who Can Use Care Bundles
- Anyone in any clinical setting with an agreement of the clinical team leaders
- Infection Control team should proffer support with regard to implementation and urge on data collection, analysis and feedforward.

Types of Care Bundles
- Ventilator Bundle
- Central Line Bundle
  - Central Line Associated Blood Stream Infection (CLABSI)
  - Catheter associated urinary tract infection (CAUTI)

Ventilator Associated pneumonia:
A Nosocomial pneumonia associated with mechanical ventilation either by Endotracheal tube or Tracheostomy that develops within 48 hours or more of hospital admission and which was not present at the time of admission.
Ventilator Bundle:
- Elevate the head of the bed up to 30-45 degree
- Sedation Vacation and to assess for readiness to extubate
- Stress Ulcer prophylaxis
- Deep vein thrombosis
- Oral hygiene with chlorhexidine

Central Line Associated Blood Stream infection (CLABSI)

A CLABSI is a serious infection that occurs when microbes enter the bloodstream through the central line. It occurs when three criteria exist:
1. Clinical signs of infection - eg: fever, rigors, altered mental status
2. When there is no alternate source of blood stream
3. Positive blood culture.

CLABSI Bundle:
- Hand Hygiene
- Adhere to proper insertion practices
- Maneuver and maintain central lines appropriately
- Chlorhexidine skin antisepsis
- Appropriate catheter site selection
- Daily review for necessity of catheter and prompt removal of superfluous of lines

Catheter Associated Urinary Tract Infection (CAUTI)

A Catheter associated urinary tract infection occurs when germs enter the urinary tract through the urinary catheter and cause infection. The risk of CAUTI can be reduced by assuring that catheters are used only when required and removed as soon as possible. It should be placed by using aseptic technique and closed sterile drainage is maintained.

Bundles for CAUTI
- Hand Hygiene
- Avoid unnecessary urinary Catheters
- Maintain proper aseptic technique while insertion
- Maintain urinary catheter based on recommendation
- Daily review for necessity of urinary catheter

Surgical Site Infection (SSI)

CDC defines SSI as an infection that occurs after surgery in the part of the body where the surgery took place.
It can be sometimes
- Superficial infections involving the skin only. This superficial infection occurs within 30 days after surgical procedure.
- Deep Incisional SSI- Infection occurs within 30 days of surgery, if no implants is left in place or within 1 year, if implant in space

SSI Bundles:
- Antibiotic Prophylaxis
- Body wash with soap or antiseptic agent prior to surgery
- Use electric clippers for part preparation
- Use alcohol-based disinfectant for skin preparation in the operation room
- Maintain intraoperative glycemic control
- Maintain preoperative normothermia
Strategies for promoting Bundle:

Forming a committee to

- Review bundle care recommendation
- Assort them to current unit practices
- Generate a timeline for implementation
- Plying education and communication to unit staff
- Conducting audits to assess compliance with bundle
- Reporting the result back to unit staff regularly.

Summary:

Care bundles comprise a set of evidence-based measures that, when implemented together, will have an improvement in patient care and have a greater smash than that of the isolated implementation of individual measures. Specific care bundles include bundles for the prevention of central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), ventilator-associated pneumonia (VAP), and surgical site infection. Bundles help to create decisive and congruent care systems in hospital settings. The effective implementation of a care bundle requires that the measures are adapted to the local setting; appropriately followed; entrenched in the patient care culture and; recorded and evaluated to ensure compliance by all members of the healthcare team involved.

Reference
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