



## Service Priorities and Programmes

### Electronic Presentations

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#### **Implementation of a Care Bundle to Reduce Surgical Site Infection in Orthopaedic Surgery of NDH**

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#### **Keywords:**

Care Bundle

Surgical Site Infection

Orthopaedic Surgery

#### **Introduction**

Since 2014, an increasing trend of surgical site infections (SSI) was noted in Orthopaedic Surgery. SSI increased from 6 cases in 2013 to 11 cases in 2014. The trend of compliance in antibiotic prophylaxis "within 30 minutes before incision" was decreasing from 88.1% in 2012 to 83.6% in 2014. Further breakdown of the compliance rate in 2014, the rate continuously dropping from 83.93% in 1Q to 85.94% in 2Q and reached 78.9% in 3Q, 85.71% in 4Q 2014.

#### **Objectives**

To implement care bundles to reduce the risk of surgical site infection for Orthopaedic Surgery from February 2015 in NDH.

#### **Methodology**

In addition to the Recommendations on Prevention of SSI by SCIC, ICB & CHP 2009, the care bundle was implemented to reduce the risk of SSI in patients undergoing orthopaedic surgery from February 2015. It consists of 5 elements including:

- 1). Appropriate Time of Antibiotic Prophylaxis (timing and re-dosing):
  - Administration of prophylactic antibiotic at the time of draping is adopted
  - Draping time should be confirmed at timeout and write down in the MARv by surgeon accordingly
  - Antibiotic prophylaxis should be injected before application of tourniquet
  - "Re-dosing after \_\_\_ hours" would be written on the white board in the operating room (OR)
- 2). Surgical Scrubbing
  - Keep maximum one bottle of Povidone iodine and three bottles of Chlorhexidine in each scrub bay area
- 3). Surgical skin preparation
  - Pilot use of 2% chlorhexidine with 70% alcohol in Laminectomy surgery
- 4). Post-operation care
  - Silver dressing material is used to keep intact for 1 week if not contraindicated
  - Special OT wound drape is used during wound inspection in Ward
  - Should perform hand hygiene before handling sterile equipment and applying outer dressing of the post-operation wound
- 5).

Operating Room Traffic - Minimize operating room traffic is recommended

**Result**

The SSI rate in Orthopaedic Surgery was decreased from 3.8% in 2014 and 2.6% in 1Q 2015 to zero in 2Q & 3Q 2015. The compliance in antibiotic prophylaxis was increased from 83.6% in 2014 to 89.9% in 1Q, 92% in 2Q and 100% in 3Q 2015. The care bundle could be successfully implemented to improve patient safety and reduce SSI's in patients undergoing Orthopaedic Surgery through a multidisciplinary teamwork and collaboration among healthcare professionals.