

Type: Poster Presentation

Final Abstract Number: 50.021
 Session: Antibiotics II
 Date: Friday, April 4, 2014
 Time: 12:45-14:15
 Room: Ballroom

The journey to achieve perfect surgical prophylaxis

H.A. Griesel¹, M. Leadsom^{2,*}, R. Krishnaswamy¹

¹ Netcare, Cape Town, South Africa

² Netcare Christiaan Barnard Memorial Hospital, Cape Town, South Africa

Background: Surgical site infections (SSIs) are the second most common cause of hospital acquired infection (HAI) and defined as infections that occur within 30 days of surgery or within 1 year of surgery if an implantable device is used. SSIs result in increased morbidity and mortality and result in increased length of hospital stay (LOS) and health care and reputational costs. Selection and dosage of antibiotics; the timing prior to incision (0-60 min) and the duration of surgical prophylaxis after surgery (< 24 hours post surgery except cardiac surgery <48 hours) are of particular importance in surgical antibiotic prophylaxis.

The aim of this study is to ensure and monitor that all patients receive the correct antibiotic at the correct dose, at the correct time before incision and for the correct duration of surgery.

Methods & Materials: 375 peri-operative cases were audited over a 32-week period in the main theatre complex. The following parameters were monitored: (1) appropriate use and dosage of antibiotics according to the Netcare Ltd. Surgical antibiotic prophylaxis guidelines (2) time of administration of antibiotic prior to the incision and (3) duration of therapy after surgery. Improvement methodology was used therefore six data points above the median suggests a significant improvement.

Results: It was found that over the 32 week period the % of cases with a surgery-choice of antibiotic match has shown no improvement, although the median were 96%. There has been a significant improvement in the cases with the correct prophylactic dose given and with the amount of cases with the correct time of antibiotic dose given prior to incision. No improvements have been made with regards to the duration of prophylactic antibiotic treatment after surgery. Furthermore no improvements could be shown with the overall compliance to the surgical prophylactic protocol.

Conclusion: The majority of surgical cases at Netcare Christiaan Barnard Memorial Hospital (CBMH) are compliant with the Netcare Ltd surgical antibiotic prophylactic guidelines. Although improvements could not be shown in all the aspects of surgical prophylaxis, the journey will continue until the destination is reached: "Perfect Prophylaxis".

<http://dx.doi.org/10.1016/j.ijid.2014.03.865>

Type: Poster Presentation

Final Abstract Number: 50.022
 Session: Antibiotics II
 Date: Friday, April 4, 2014
 Time: 12:45-14:15
 Room: Ballroom

Implementation of a Hang Time Project in a private hospital in the Eastern Cape

L.N. Stone¹, C.C. Beukes^{2,*}

¹ Netcare Greenacres Hospital, Port Elizabeth, South Africa

² Netcare Pretoria East Hospital, Pretoria, South Africa

Background: Hang-time is the time from when an antibiotic is initially prescribed to when the first dose is administered. A study on antibiotic treatment in patients with sepsis, showed a decrease in patient survival by 7.6% for each hour treatment was delayed (Kumar, Roberts, Wood *et al.*, 2006, p. 1592). Administering antibiotics without delay results in improved patient outcomes.

Methods & Materials: The study measured the hang time in four wards. Baseline data was collected over two weeks and training was done by pharmacists during weeks three and four. Pharmacists visited the ward twice a week and recorded the hang time of the initial dose (day 1) of antibiotic treatment. The hang time was calculated by subtracting the time of administration from the time of prescribing. Hang time was 100% compliant in patients who received their antibiotic within the first hour. Patients receiving prophylactic antibiotic treatment were omitted from the study. The information was captured on Excel® and a hang time graph was generated for each ward. The results were submitted weekly to the nursing and unit managers.

Results: Data was collected over 20 weeks in wards E and F, both being medical wards. Before pharmacy intervention, the average compliance was 28.2% and 26.1% respectively. From week 3 to 17, the average compliance increased to 49.6% and 51.1% respectively. Injectable antibiotics were placed into ward stock from week 18 which slightly improved the hang time in both wards, resulting in an average compliance of 62.6% and 54.2% respectively, from week 18 to 20. Further training is currently underway in these two wards.

Data was collected over 12 weeks in wards C, the isolation unit and in HiCare. Before pharmacy intervention, the average compliance was 44.3% and 56.3% respectively. After training, the average compliance from week 3 to 12 increased to 63.4% and 79.7% respectively.

Conclusion: Hang time improved through the use of posters to create awareness, in-service training and encouraging staff to order all antibiotics as "stat". The compliance further improved with the implementation of injectable ward stock items. More improvement work is required to achieve and maintain 100% compliance in all wards.

<http://dx.doi.org/10.1016/j.ijid.2014.03.866>