

Clinical Studies:

Antimicrobial Prophylaxis in TRICARE Gastric Bypass Surgery

Humana Military Healthcare Services (HMHS) is committed to promoting excellent quality of clinical care and treatment for TRICARE beneficiaries. We demonstrate our commitment by measuring our efforts and performance against industry best practice and working to exceed those standards.

As part of our Clinical Quality Management Program, HMHS conducts clinical studies to encourage improvement in the care and treatment of our beneficiaries. Recently, a retrospective study was accomplished on antimicrobial prophylaxis in gastric bypass surgery performed on TRICARE patients in Tennessee, South Carolina, Georgia, Florida, Alabama and Mississippi. This study topic was selected to determine how TRICARE providers were meeting the recommendations from the 2002 National Surgical Infection Prevention (SIP) project. This project was implemented by the Centers for Medicare and Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC) with the goal of decreasing morbidity and mortality associated with postoperative Surgical Site Infections (SSIs) and to promote appropriate selection and timing of administration of prophylactic antimicrobials. It is noted that, while approximately 80-90% of surgical patients receive some type of antibiotic prophylaxis, recent studies have shown that choice of regimen, timing of administration or duration of prophylaxis is inappropriate in 25-50% of cases.

In addition to the CMS and CDC recommendations, HMHS expanded the study to include outcome, process and balance measures as defined by the Institute of Healthcare Improvement (reprinted from www.IHI.org with permission of the Institute for Healthcare Improvement (IHI), (c) 2005). This study was designed to review gastric bypass cases from 2000 to 2004 and the measures, goals, and results are as follows: *(It was assumed the patients in this study had no infection prior to surgery):*

Measure	Performance Goal	Overall Results
Rate of Gastric Bypass Cases with SSIs*	< 20% (as estimated by the CDC)	5%
Percent of Surgical Gastric Bypass Cases with On-Time Prophylactic Antibiotic Administration** (IHI outcome measure)	100%	65%
Percent of Gastric Bypass cases with timing documented (IHI process measure)	100%	75%
Percent of Gastric Bypass Patients who received prophylactic antibiotics after antibiotics were discontinued within 24 hours of surgery (IHI balance measure)	100%	Data Collection in progress

*As defined by the CDC as superficial incisional, deep incisional, or, organ or space infection.

**Adapted from original source material on the Institute for Healthcare Improvement (IHI) Website: www.IHI.org.

The results? Overall, our network providers are doing an excellent job of administering prophylactic antibiotics but timing and documentation need improvement. The balance (fourth) measure is in the data collection phase and results are expected by third quarter, 2005.

Opportunity for Education

As noted by the CDC Guideline for Prevention of Surgical Site Infection, 1999 (retrieved via the world wide web at cdc.gov/ncidod/hip/ssi/ssi.pdf), simple protocols of antimicrobial prophylaxis (AMP) timing and oversight responsibility should be locally designed to be practical and effective. The AMP should be administered only when indicated, and selected based upon its efficacy against the most common pathogens causing SSI for a specific operation and published recommendations. The CDC recommendation for administration is 30 minutes to 1 hour for most commonly used AMP agents however, there are some exceptions. For this study, this was defined as the number of patients with AMP administration one hour prior to surgical incision compared to the number who received AMP (at any time) prior to surgical incision.

In conjunction, the documentation of AMP administration is not only good clinical practice but critical to determining compliance with the CDC guidelines. Timing is defined by IHI as both times (AMP and incision) are documented for the case. This is compared to the number of patients identified as having received AMP.

Both on-time administration and timing documentation improved over the four year study period but have not achieved the desired performance goal. HMHS plans to re-assess these measures in 2006. With your help, we can continue to improve the care and treatment our TRICARE beneficiaries receive. We encourage you to visit the IHI (ihi.org) and CDC (cdc.gov) website to learn more about the prevention of SSIs and how your organization can evaluate these same measures for improvement.