

## Introduction/Study Question:

Preoperative antibiotic administration is a vital part of patient care for many operations. One of the many jobs of anesthesia providers is administering the appropriate antibiotics within 1 hour prior to incision. At our institution there is not a standard system for preordering the necessary antibiotics for a given procedure. This lack of standardization can lead to distractions and even missed antibiotic administration. Attending surgeons are also not required to be present during the “time out” when antibiotics are discussed which leaves the surgery resident in charge of this discussion.

## Methods:

During the month of May 2017 data was collected on all surgical cases at our children’s hospital. The following questions were asked for each case:

1. Is the case scheduled or emergent?
2. Were antibiotics indicated?
3. Were antibiotics preordered?
4. Were they prepared by pharmacy?
5. If anesthesia had to dilute the antibiotics was it a distraction from patient care?

Anesthesia techs assisted with the dispersal and collection of surveys

## Results:

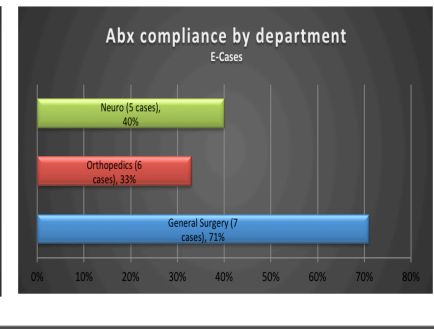
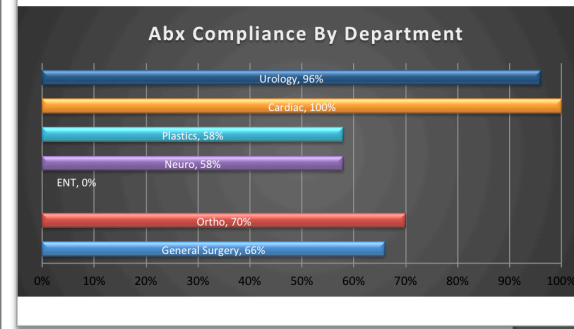
The lowest compliance occurred with emergent cases, as would be expected given the nature of emergencies. For these cases orthopedics and neurosurgery had 33% and 40% compliance, respectively.

Scheduled cases had a range of compliance from 58 to 100%. Overall orthopedics, neurosurgery and general surgery had the lowest compliance in this category.

Distractions were reported in 30% of cases.



## Tables:



## Discussion and conclusions:

Antibiotic administration prior to incision is paramount. It is tracked closely by JACHO and is often used as a measure of practitioner performance. It is also a way to decrease risk of infection related to surgery for our patients. However, the inconsistency of preordering antibiotics for surgeries coupled with teaching new learners (particularly in a busy academic center) can lead to significant distractions during induction. This can lead to errors in drug dilution when preparing the antibiotics or forgetting to give them altogether. Collecting this data has enabled us to engage our pediatric surgeons and NPs in a dialogue to improve the preordering of antibiotics for scheduled and emergent cases. Standardization of this process is in the best interest of our patients. We have developed a “delay button” in our electronic medical record to improve our data capture and guide interventions in the future.

## References:

1. Weber et al. Timing of surgical antibiotics prophylaxis: Phase 3 RCT. *Lancet Infect Dis.* 2017; 17: 605-614
2. Brazler et al. Antimicrobial prophylaxis for surgery: An advisory statement from the National Surg Prevention Project. *Clin Infect Dis.* 2004 38:1706

