

## Optimizing Dental Prophylaxis in Patients with Prosthetic Joints

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### Background

Antibiotic prophylaxis prior to dental procedures in patients with prosthetic joints has not been shown to decrease the risk of prosthetic joint infections (PJI). The 2016 AAOS guidelines indicated prophylaxis for low-risk patients was “rarely indicated” and clindamycin was not recommended.

### Study Aims

This study aimed to improve provider understanding of and adherence to AAOS guidelines regarding antimicrobial prophylaxis.

### Methods

To decrease the amount of unnecessary prophylactic antibiotic prescriptions (based on AAOS guidelines) the following interventions were implemented:

1. providing educational sessions to providers
2. creating an order set with AAOS calculator link

In order to assess the effect of modification:

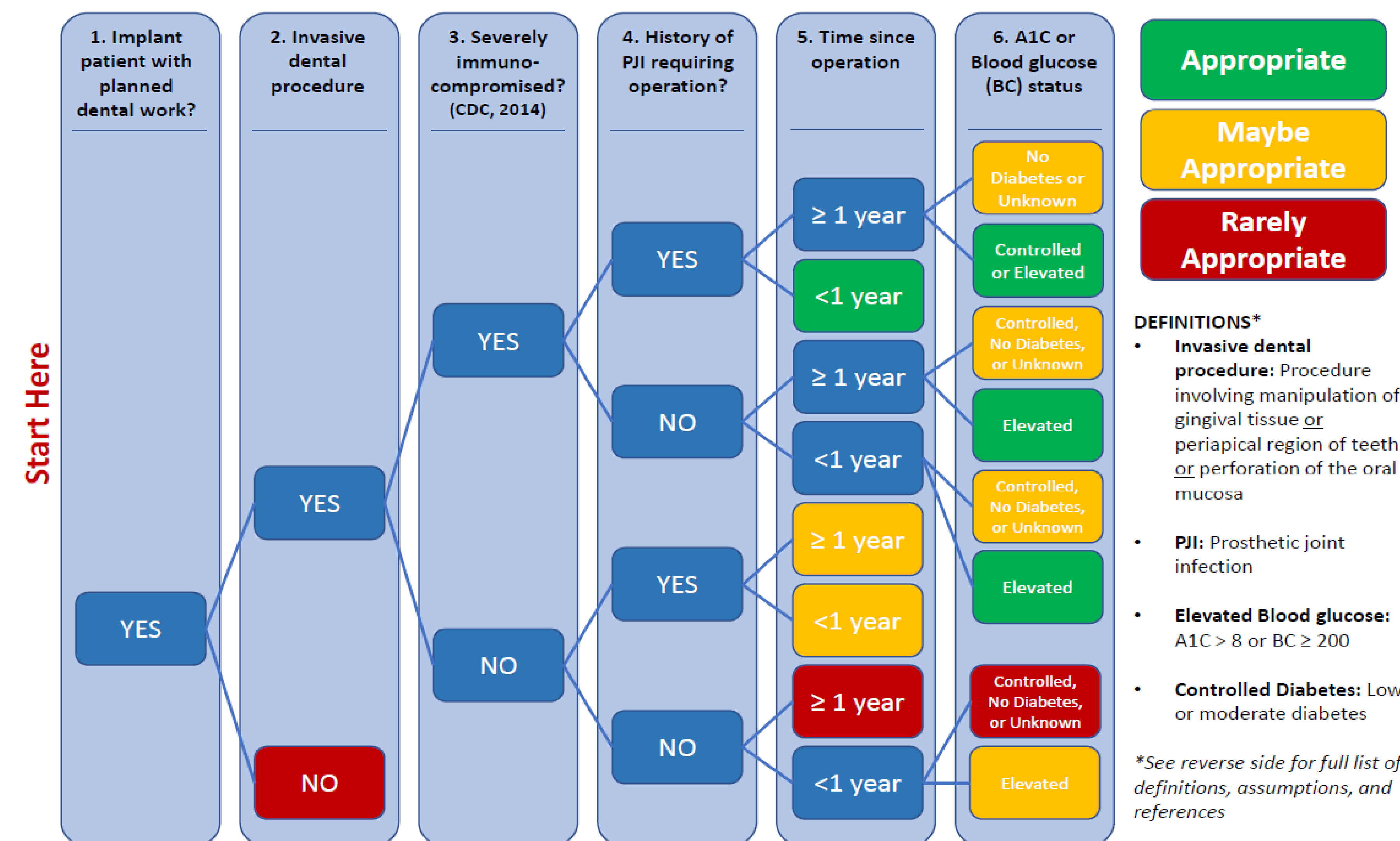
1. Pre- and post-educational educational lesson surveys were collected to assess the level of understanding.
2. Retrospective chart review of prescriber data will be performed to further assess the durability of the impact.

### Results

1. 27.8% improvement in understanding the appropriateness of prophylactic antibiotics.
2. 50.4% improvement in understanding of the type of antibiotic used as prophylaxis.

### Care Decision Tree

When is it appropriate to prescribe prophylactic antibiotics for patients with orthopaedic implants?



A recent study shows that 93.0% of antibiotic prescriptions for dental prophylaxis in patients with prosthetic joints were inappropriate.



### Understanding of Appropriate Antibiotic Prophylaxis Duration

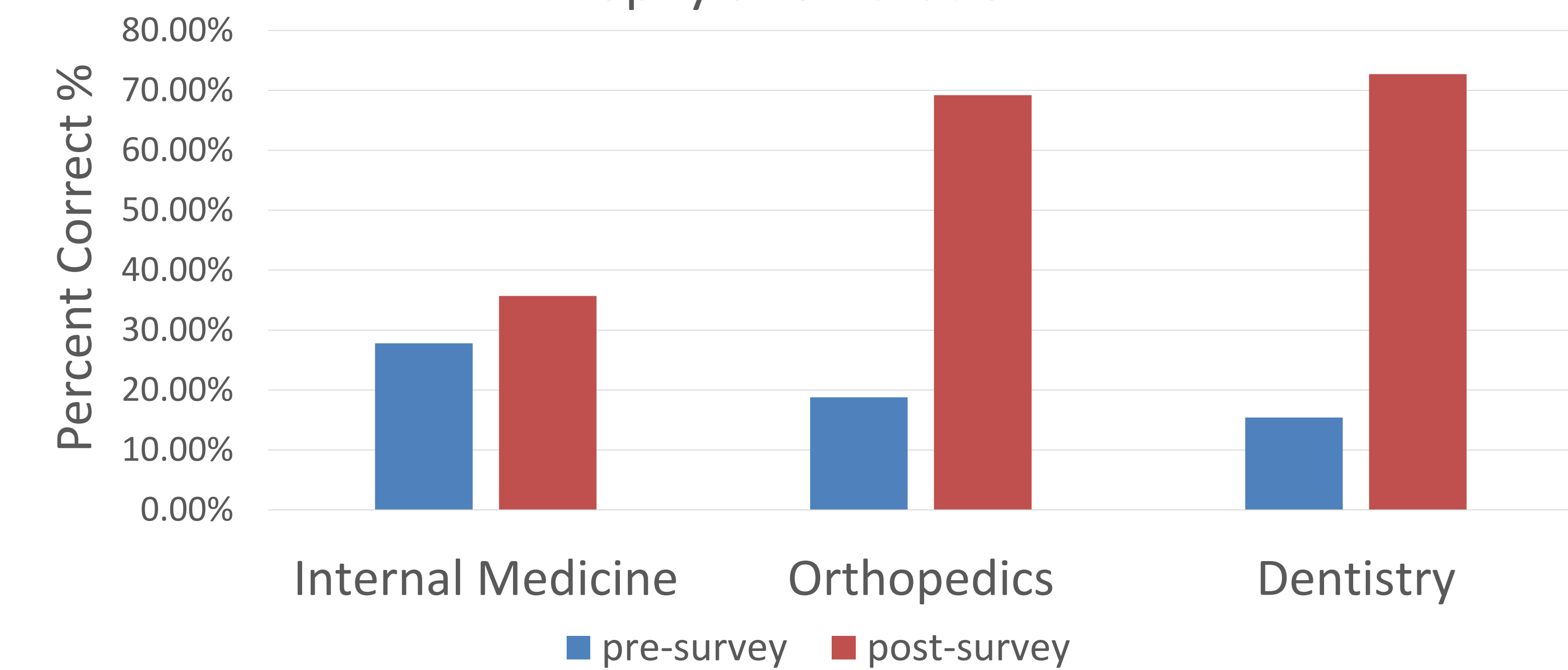


Figure 1. Measuring providers' understanding of the appropriateness of antibiotic prophylaxis duration. There was a 7.9%, 50.4%, and 57.3% improvement in Internal Medicine, Orthopedics, and Dentistry groups respectively.

### Understanding of Appropriate Antibiotic Prophylaxis Type

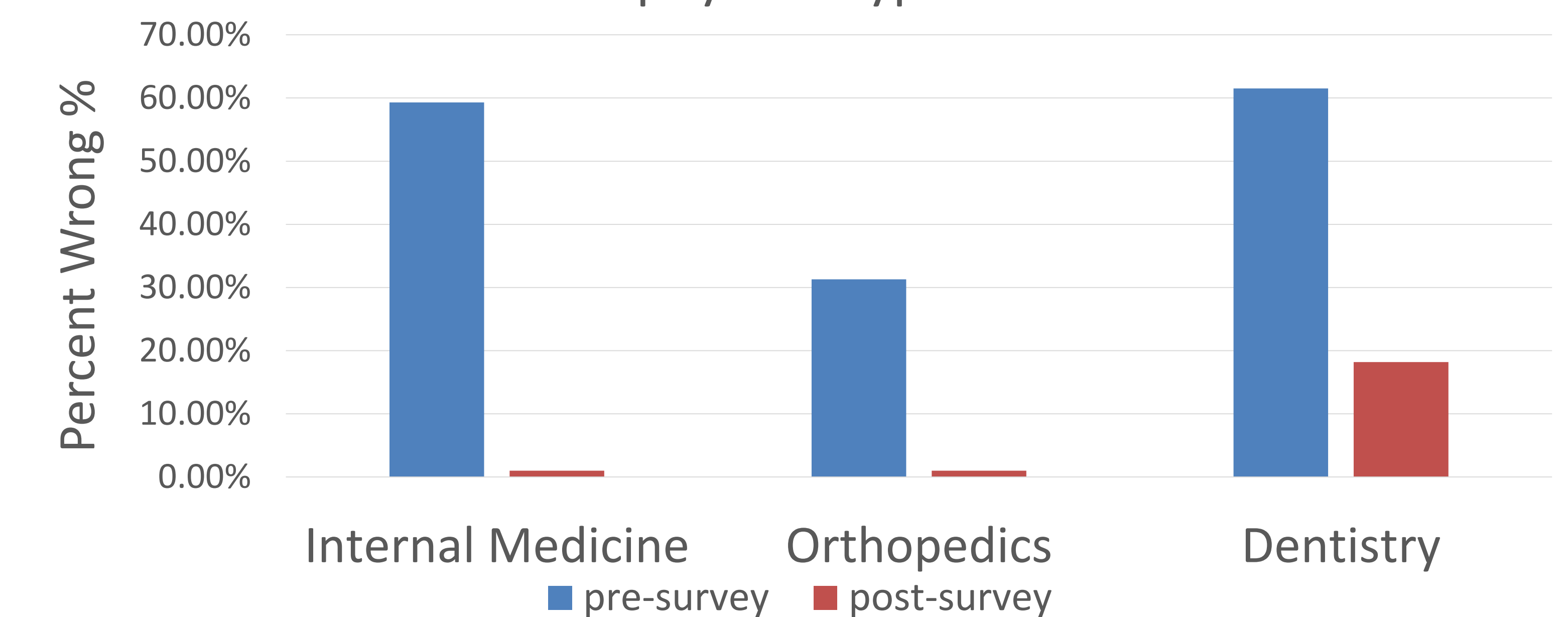


Figure 2. Measuring providers' understanding of the appropriate antibiotic to be used as prophylaxis. There was a 59.3%, 31.3%, and 43.3% improvement in Internal Medicine, Orthopedics, and Dentistry groups respectively.

### Conclusions

1. Formal educational lessons improved the providers' understanding of the AAOS guidelines.
2. Further chart review will determine the durability of the lessons and order set implementation