



Reducing Overuse of Prophylactic Antibiotics in Carpal Tunnel Release

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Background

- A number of studies support the claim that antibiotics are overused in clean hand surgery.
- American Academy of Orthopedic and Plastic Surgeons recommend against the use of preoperative antibiotic prophylaxis for carpal tunnel release and clean hand surgical procedures respectively

Objectives

- To assess the effect of a program directed at reducing the use of unnecessary antibiotic prophylaxis in clean hand surgeries
- To elicit reasons for continued use of prophylactic antibiotics despite evidence indicating its ineffectiveness.

Methods

Proxy for clean hand surgery

- Carpal Tunnel Release (CTR)

Intervention

- Hand surgeons in 10 hospitals, Kaiser Southern California
- 1) Educational Session
- 2) Year long, monthly antibiotic use audit and feedback cycle for individual surgeons with their surgeon leader

Outcomes

- 1) Antibiotic use data
- 2) Follow up surgeon survey

Results

Table 1: Summative Antibiotic Use

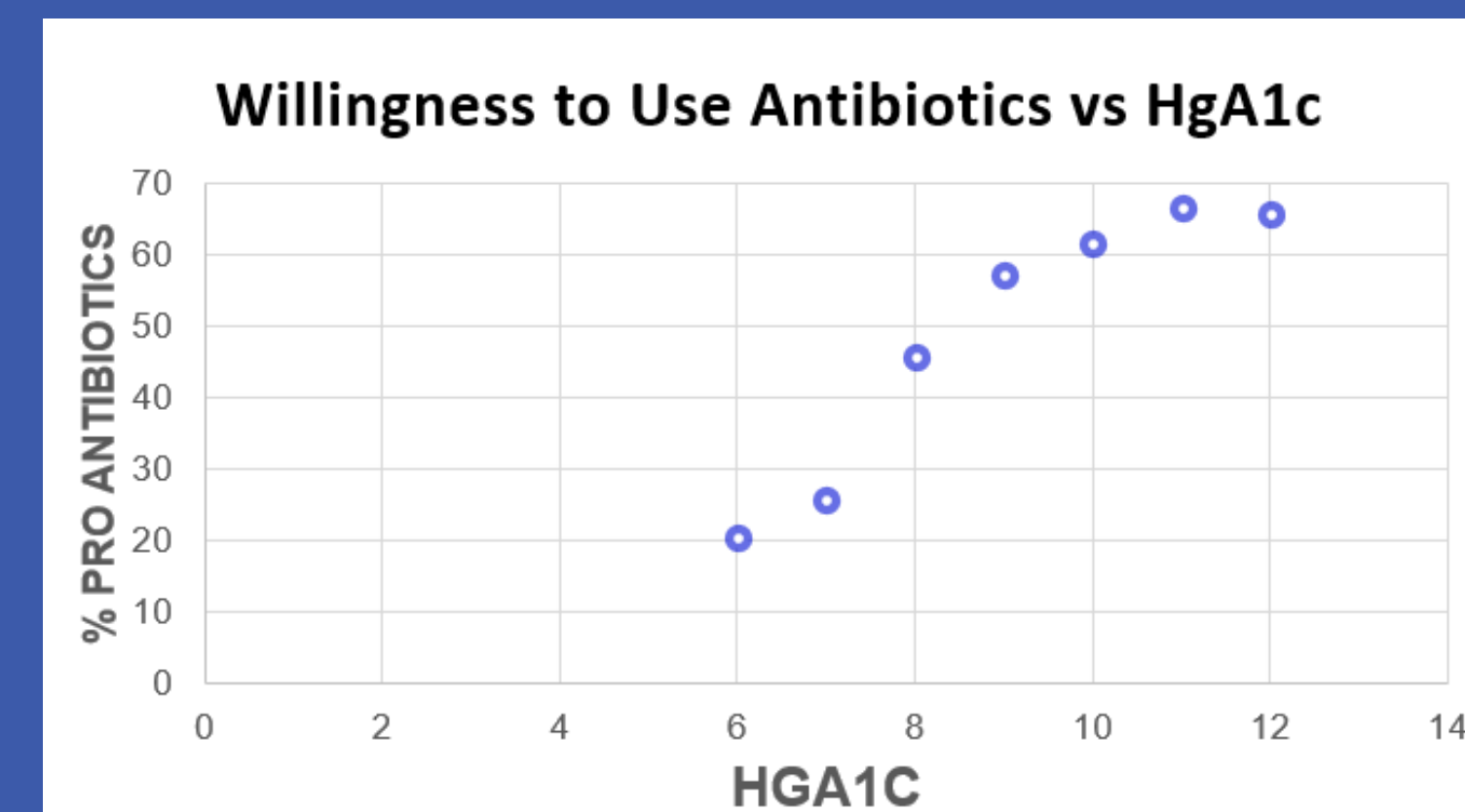
	October 2017- September 2018	October 2018- September 2019	10/1/2018	9/1/2019
CTR Cases with Antibiotics	1223	531	77	28
Total CTR cases	2379	2540	226	208
Rate of Antibiotic use	*51.4%	20.9%	34.1%	*13.5%

Brief Stats

- Decrease in median rate of antibiotic use was confirmed to be statistically significant (T=0, α level < 0.05).
- Two-sided Wilcoxon Signed rank test for change in number of CTR cases was not significant (T=25).
- Per hospital, the average rate of decrease was 31.6% (95% CI 7.01-56.2).

Survey Highlights

- 35 out of 39 surgeons (89.74%) responded.
- 97.1% agree with the evidence
- 71.4% received the in person training and feedback
- 65.7% of surgeons agreed with use in immunocompromised patients
- 25.7% of surgeons believed that having trouble removing the antibiotic order from their order set
- 60% of surgeons reported physicians assistants were unaware of the program



Discussion and Conclusions

Conclusions

- The rate of antibiotic usage in CTR decreased after implementing a surgeon led program to reduce unnecessary antibiotic prophylaxis in CTR.
- The follow up cross sectional survey identified patient related and systemic barriers to implementation of this best practice

Limitations

- The small sample size of physicians, as well as the single geographic location (Southern California)
- Lack of a separate control group of physicians who did not participate in the program
- Lack of monthly data the year prior to the intervention
- Lack of follow up data from the year 2019-2020
- The survey questions themselves lacked specificity
- PAs were not included in the intervention

Future Study

- Quantification of patient outcomes, including annual rate of SSI. A follow up study is ongoing and may provide good insight as to whether the SSI rate was affected over the course of this intervention.

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