- Abstract Type: Quality Improvement

Author(s)

1. JG

John Guzzi, MD (he/him/his)

Position:
Chief Resident

Organization:
Yale New Haven Hospital

Role:

Presenting & Primary Author

SAMBA Membership Status
Yes

Is this author a Resident/Fellow/Med Student?
Yes

If you are a Medical Student/Resident/Fellow do you want your abstract to be considered for Medical Student/Resident/Fellow Abstract Awards?
Yes

2. JH

Jaime B. Hyman, MD

Position:
Division Chief, Ambulatory Anesthesiology

Organization:
Yale School of Medicine

Role:

Author

Abstract

Was this study was industry sponsored?

Introduction

Population: Adults (age > 18 years old) undergoing surgery with general anesthesia in the Yale New Haven Health System from October 1, 2021 - March 31, 2022 and June 30, 2022 - December 31, 2022.

Intervention: An EPIC optimization highlighting patients at high risk for PONV was introduced on May 15, 2022. With this optimization, an Apfel score is calculated automatically for each patient and displayed in the intra-procedure workflow. A Best Practice Advisory is linked to the individualized Apfel score, displaying risk-based PONV prophylaxis recommendations based on the SAMBA-sponsored guidelines. (Figure 1)

Methods

Methods: This retrospective study analyzes the intra-operative records of 57,163 patients who received general anesthetics within a large health system. 28,705 patients were in the pre-intervention group (October 1, 2021 – March 31, 2022). 28,458 patients were in the post-intervention group (June 30, 2022 – December 31, 2022). Patients in each group were categorized by their calculated Apfel score (0 = low risk, 1-2 = moderate risk, 3-4 = high risk) and the mean number of prophylactic antiemetics was calculated pre and post-intervention for each risk category.

Results

Results: From the pre-intervention group (n=28,705), 1,427 patients were categorized as low risk (Apfel score 0), 25,437 patients were categorized as moderate risk (Apfel score 1-2), and 1,841 patients were categorized as high risk (Apfel score 3-4). The mean number of prophylactic antiemetics administered was 1.77 (STDEV 0.75), 1.79 (STDEV 0.71), and 2.1 (STDEV 0.89) for low, moderate, and high-risk patients, respectively.
From the post-intervention group (n=28,458), 1,365 patients were categorized as low risk (Apfel score 0), 24,538 patients were categorized as moderate risk (Apfel score 1-2), and 2,555 patients were categorized as high risk (Apfel score 3-4). The mean number of prophylactic antiemetics administered was 1.67 (STDEV 0.84), 1.84 (STDEV 0.90), and 2.46 (STDEV 1.07) for low,

moderate, and high-risk patients, respectively.
Overall, following this EPIC optimization, patients at high risk for PONV (Apfel score 3-4) received an increase in administration of prophylactic antiemetics (increase in mean of 0.36, 95% CI 0.3-0.42; p< 0.0001,).
Patients at moderate risk for PONV (Apfel score 1-2) also received an increase in administration of prophylactic antiemetics (increase in mean of 0.05, 95% C.I. 0.04-0.06; p< 0.001) This difference is statistically significant but is unlikely to be of clinical importance.

Conclusion

Conclusions: An EPIC optimization utilizing an automatically calculated Apfel score for deployment of an individualized intraoperative Best Practice Advisory alert resulted in a significant improvement in administration of prophylactic antiemetics for patients at high risk for PONV.

Uploaded File(s)

Upload Abstract in PDF

2-27 SAMBA abstract_final.pdf