

# Reducing the Incidence of Postoperative Nausea and Vomiting Using a Predictor Scale

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## INTRODUCTION:

Postoperative nausea vomiting (PONV) is the most complex adverse effects after receiving anesthesia

- Delay recovery
- Wound dehiscence
- Pulmonary aspiration
- Dehydration
- Extended LOS /Unexpected admission → ↑ cost

## Internal data

- Monthly PONV rate > 65% V.S 30% National rate

## AIM:

Reduce the rate of PONV in surgical adult patients by implementing the Apfel screening tool to identify high risk patients and provide prophylactic treatment per risk.

- Integrating Apfel tool into EHR
- 100% of patients to be assessed for PONV using the Apfel tool
- Anesthesia providers provide prophylactic treatments per risk (low, moderate, high)
- Decrease rate of PONV

## METHODS:

### Setting & Population

- Post-Anesthesia Care Unit
- All adult surgical patients

### Interventions:

- Integrate Apfel tool into EHR
- Risk scores auto-populated & default into anesthesia workflow
- Individualized prophylactic treatments provided intra-operatively per A&A guideline

**Measures:** Data collected weekly

# Screening surgical patients by integrating the Apfel Simplified Score and suggested prophylaxis guidelines can significantly reduce the rate of PONV.



## Results

- Overall percentage of PONV reduced to below the National rate of 30-35%.
- Among 1,056 adult surgical patients, 36% screened positive for PONV, with Apfel scores of three and four.
- Among patients who scored high, 79% received prophylactic treatment per A&A PONV management guideline recommendations.
- Among those who received treatment per the guideline, 19.5% reported nausea and required antiemetic treatments postoperatively.

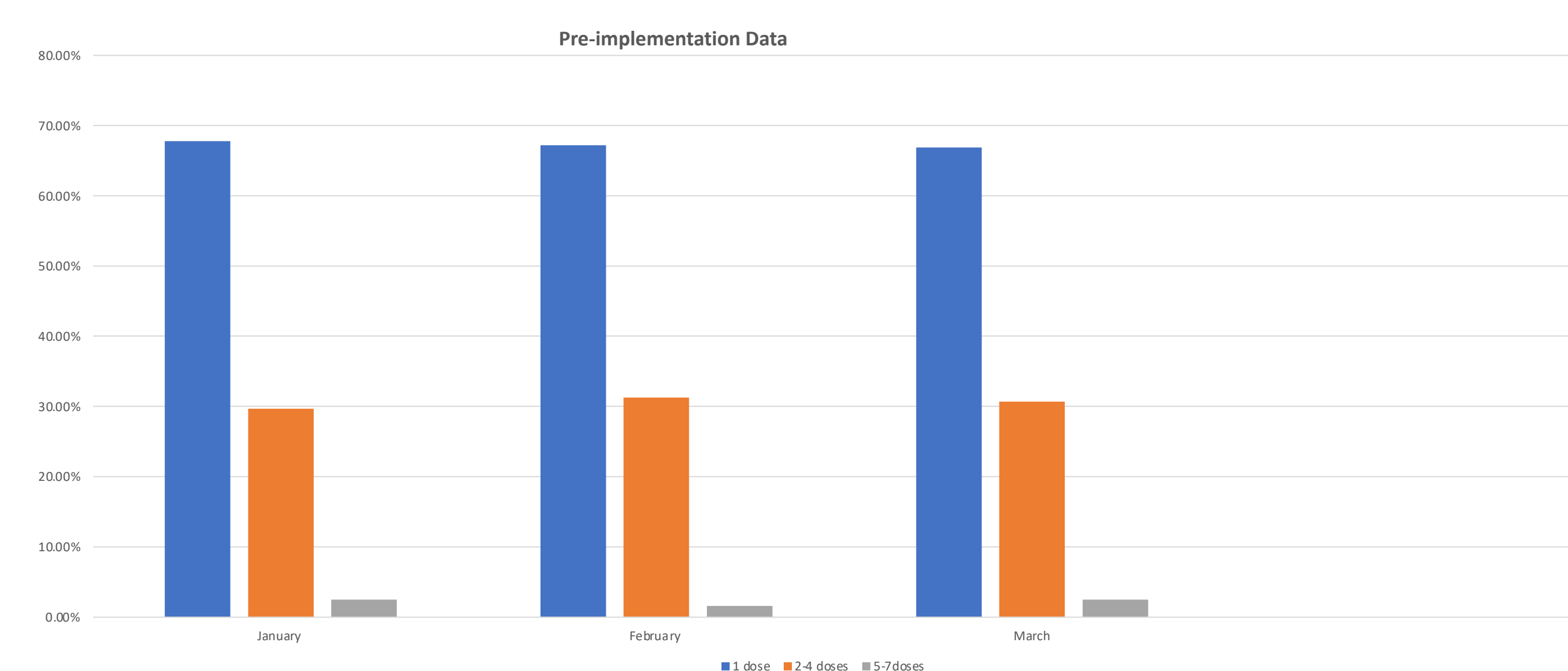
## Discussion

- Rate of PONV decreased after integrating the Apfel screening tool into the EHR.
- The risk score aided anesthesia providers with creating an individualized treatment plan.
- The result of this initiative is consistent with findings from the literature supporting reducing the PONV rate when combining the Apfel risk score with the PONV management guideline.

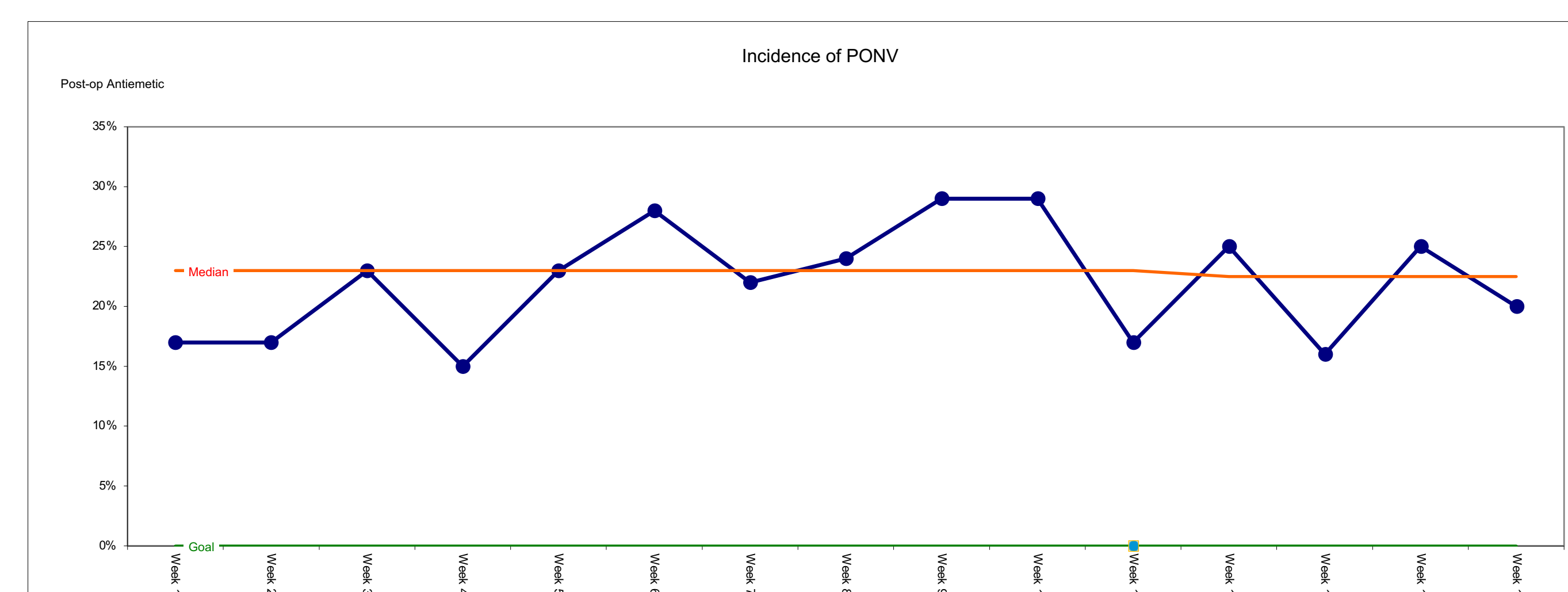
### Limitation:

- Anesthesia's decision to adhere to the recommended guideline was outside the scope of nursing practice.
- Variability in result was partially associated with having various numbers of patients.

## Pre-implementation Data



## Post-implementation Data



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