

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

Farzaneh Agahi

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 with the Apfel Simplified Score and providing prophylaxis guidelines can significantly reduce the rate of PONV.



Results

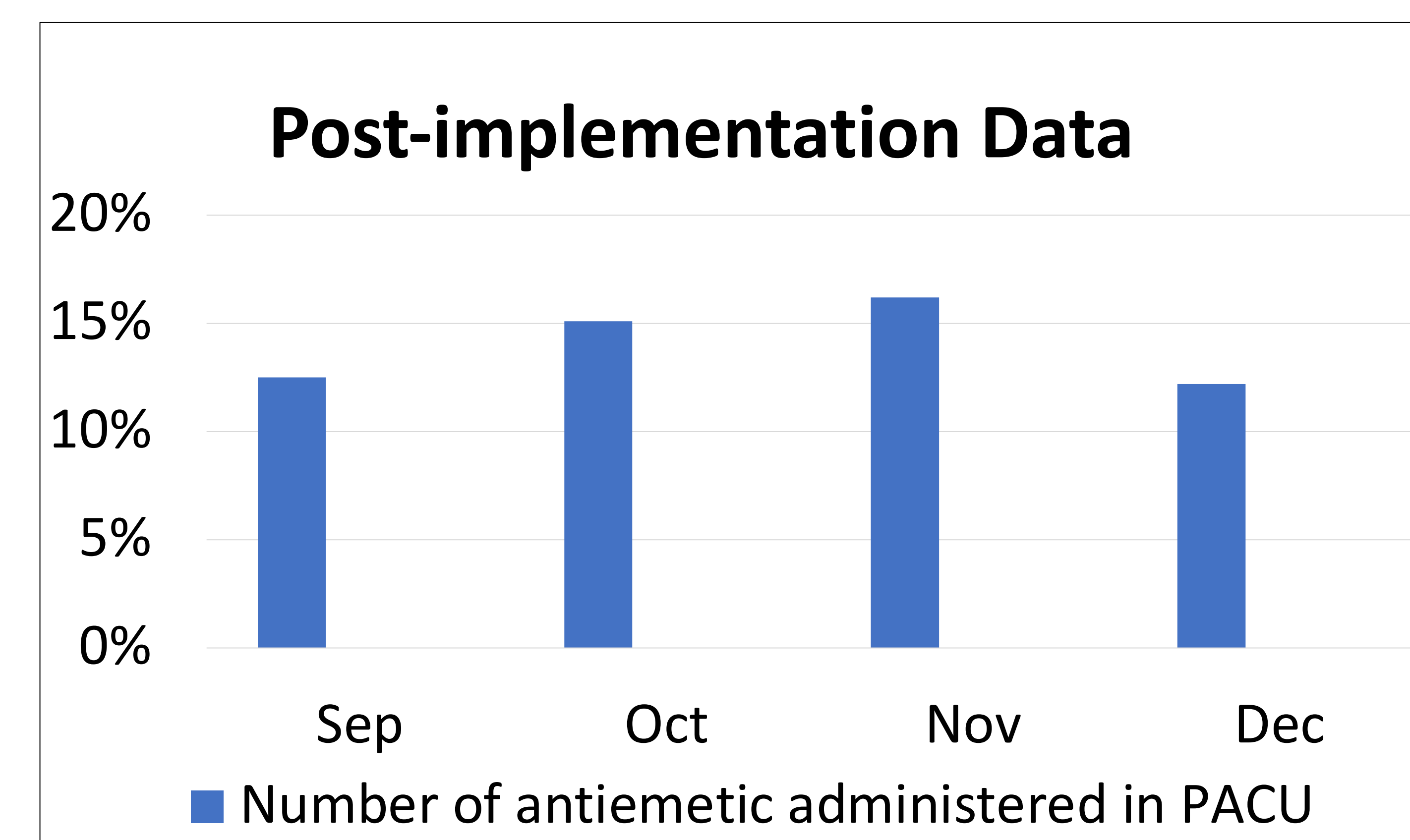
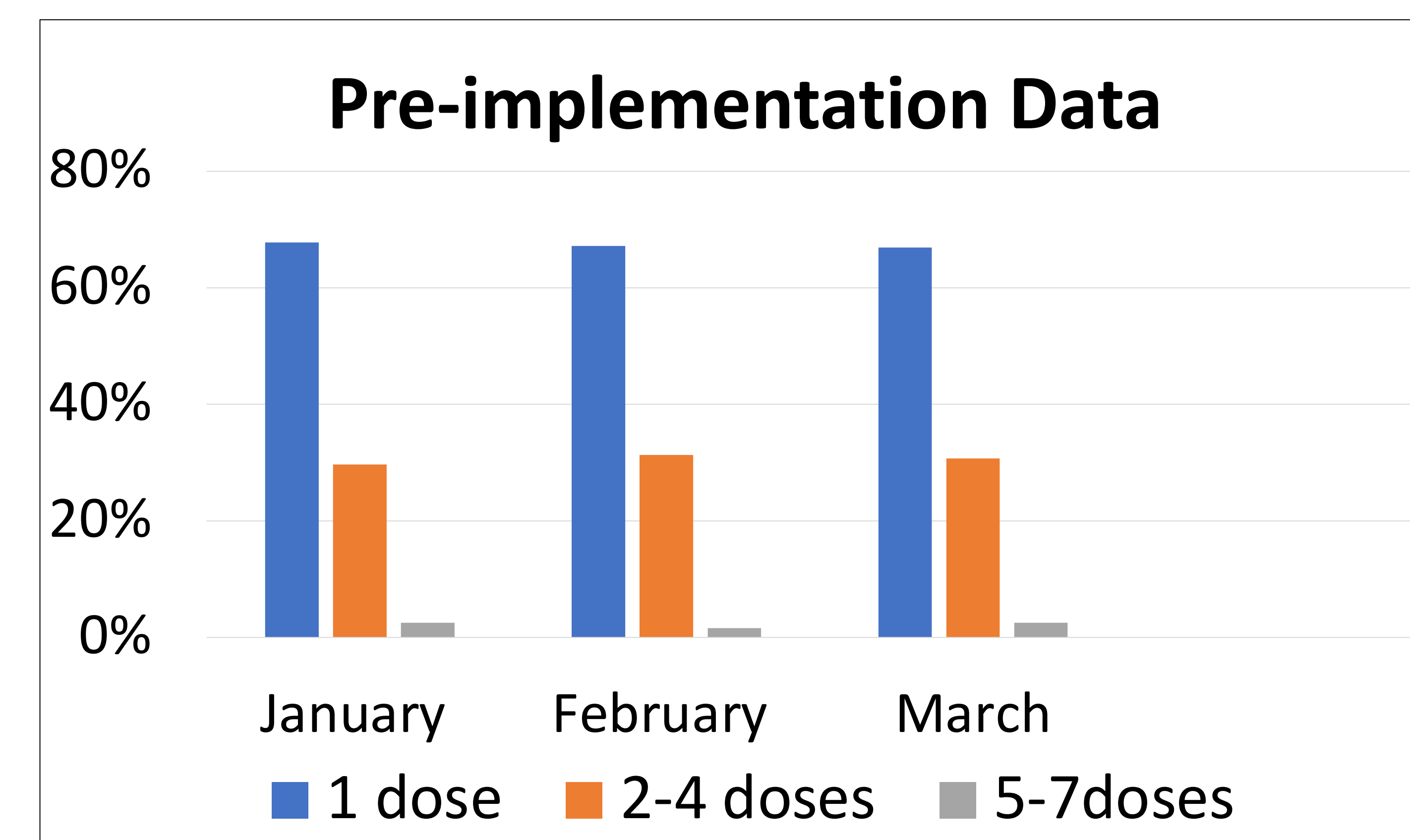
- Overall percentage of PONV reduced to below the National rate of 30-35%.
- Among 2,340 adult surgical patients, 37.5% screened positive for PONV, with Apfel scores of three and four.
- Among patients who scored high, 81.5% received prophylactic treatment per A&A PONV management guideline recommendations.
- Among those who received treatment per the guideline, 19.% 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:

- Apfel score in EHR does not trigger a PONV medication order set. Anesthesia providers discretion regarding approach to PONV management.



Farzaneh Agahi, AGACNP/CNS DNP Student, BSN, RN, University of Maryland School of Nursing.

Athir Morad, MD, Howard County General Hospital, Johns Hopkins.



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