Title: A survey approach to identify if the surgical out-patient unit at AAMC follows the recommended guidelines set by ASPAN for the treatment of PONV

Author: Denise Matteson BSN RN CAPA and Cathaleen Ley, Ph.D, RN

Email of Author Contact: dmatteson1@aahs.org

Institution Affiliation: Anne Arundel Medical Center (AAMC)

Introduction Post-Operative Nausea and Vomiting (PONV) is the most common side effect of surgery. It affects one third of all surgical patients. It is the strongest predictor for a prolonged postoperative stay and unanticipated admissions. Patients fear having PONV post operatively more than pain. AAMC identified PONV as a significant issue. Accurate identification of patients risk and appropriate treatment will reduce PONV.

Practice Question: In the outpatient surgical population what are the risk factors associated with PONV and what preventative therapies should be used to reduce PONV inpatients high risk for the development of PONV?

Search Strategy: A literature review using Pub-Med was conducted to identify clinical guidelines on risk factors for PONV and preventative therapies. The American Society of Perianesthesia Nursing (ASPAN) Guidelines for the Prevention and/or Management of PONV/PDNV (2006) was identified.

Evidence Summary: The guidelines are based on a Level I meta-analysis of multiple controlled studies and Level II individual experimental studies. An appointed Strategic Work Team (SWT) consisting of 16 multidisciplinary, multispecialty experts analyzed the evidence in 2006 and formulated practice recommendations. The guidelines apply to both inpatient and outpatient populations. They serve as an evidence-based resource for anesthesia providers and Perianesthesia nurses involved with patients at risk for PONV.

Synthesis: The risk factors are supported by strong evidence: female gender, history of PONV, history of motion sickness, non-smoker, postoperative use opioids, use of volatile anesthetics, and use nitrous oxide. The following are preventive treatment recommendations: total intravenous anesthesia, anti-emetics/non-steroidal anti-inflammatory drugs, hydration, Dexamethasone, Scopolamine, regional blocks, and education.

Recommendations for Practice Change/Evaluation: Based on the review of the evidence, the guidelines have been successfully implemented at AAMC. One hundred patients were followed for PONV. By alerting anesthesia of those at high risk and by using prophylaxis treatment only 3 patients had PONV at discharge. Nurses are quantifying severity and implement rescue interventions: hydration, appropriate antiemetic, antihistamines. Those with severe history are contacted prior to surgery for possible scopolamine patch. Implementing the ASPAN guidelines for the prevention and management of PONV has been effective in reducing PONV.
Adoption of ASPAN Guidelines for Treatment of Post Operative Nausea and Vomiting (PONV) in the Ambulatory Surgical Setting

Denise Matteson BSN, RN, CAPA
Cathleen Ley Ph.D. RN
Valerie Donaldson MSN, RN, CNOR

Practice Question
In the outpatient surgical population, what are the risk factors associated with PONV and what preventative therapies should be used to reduce PONV in patients who are at high risk for the development of PONV?

Evidence Summary
The guidelines are based on a Level I meta-analysis of multiple controlled studies and Level II individual experimental studies. An appointed Strategic Work Team (SWT) consisting of multidisciplinary, multispecialty experts analyzed the evidence in 2006 and formulated practice recommendations. The guidelines apply to both inpatient and outpatient populations. They serve as an evidence-based resource for anesthesia providers and perianesthesia nurses involved with patients at risk for PONV.

Search Strategy
A literature review using Pub-Med was conducted to identify clinical guidelines for PONV and preventative therapies. The American Society of PeriAnesthesia Nursing (ASAPN) Guidelines for the Prevention and/or Management of PONV/PHDV (2008) were identified as the best practice guidelines for patients at risk for developing PONV. Therefore, we adopted the ASAPN guidelines for the prevention of PONV.

Graphs and Tables

<table>
<thead>
<tr>
<th>DATE</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>Reported increased incidents of PONV post discharge</td>
</tr>
<tr>
<td>June</td>
<td>Reviewed Literature for: PONV Risk Factors PONV Preventative Therapies Communicated to Physicians Increased incidents of PONV Developed PONV Risk Assessment Tool (see Exhibit 1) Change in practice due Phenergan administration restriction</td>
</tr>
<tr>
<td>July</td>
<td>Implemented PONV Risk Assessment Tool</td>
</tr>
<tr>
<td>August</td>
<td>Reviewed Literature for: PONV Risk Assessment Tool PONV Risk Assessment Tool Implemented Protocol Implemented changes Appropriate IV Site Selection for Phenergan administration</td>
</tr>
<tr>
<td>September</td>
<td>Evaluated survey results for impact: On level of patient reported nausea &amp; vomiting post discharge (see Exhibit 4) Gathered from post-op phone calls, only 3% reported symptoms post discharge</td>
</tr>
<tr>
<td>November</td>
<td>Plan for Evaluation of PONV Guidelines: Continue to monitor via post-op phone calls for 3 month Redesign post-op phone call questions to improve data collection Continue to use PONV Risk Assessment Tool and appropriate IV site selection</td>
</tr>
</tbody>
</table>

Exhibit 1: PONV Risk Assessment Tool

Exhibit 2: 2013 PONV Adoption Timeline

Exhibit 3: Percent of post-op patients with nausea & vomiting post treatment (N=100)

Exhibit 4: Patients’ Perception of Nausea Acuity (N=100)

Exhibit 5: Timeline

2013 PONV ADOPTION

May
- Reported increased incidents of PONV post discharge
- Gathered from Post-op Phone Calls

June
- Reviewed Literature for:
  - PONV Risk Factors
  - PONV Preventative Therapies
  - Communicated to Physicians
  - Increased incidents of PONV
  - Developed PONV Risk Assessment Tool (see Exhibit 1)
  - Change in practice due Phenergan administration restriction

July
- Implemented Protocol:
  - Use of Appropriate IV Site Selection
  - Anesthesia made aware of patients identified
  - Prophylaxis treatment given
  - Identified 18% of patients at high risk for PONV (see Exhibit 3)
  - Additional treatment given if necessary
  - Patient assessed at time of discharge

August
- Evaluated survey results for impact:
  - On level of patient reported nausea & vomiting post discharge (see Exhibit 4)
  - Gathered from post-op phone calls, only 3% reported symptoms post discharge

September
- Evaluated survey results for impact:
  - No patient returned to Emergency Department for additional treatment post discharge

November
- Plan for Evaluation of PONV Guidelines:
  - Continue to monitor via post-op phone calls for 3 month
  - Redesign post-op phone call questions to improve data collection
  - Continue to use PONV Risk Assessment Tool and appropriate IV site selection

References

Evaluation: Recommendations for Practice Change
We surveyed 100 patients during their in/out surgical experience to identify if we were practicing within the guidelines for the treatment of PONV as stated by the American Society of PeriAnesthesia Nurses (ASAPN). Our goal was to be more aware of those individuals that are prone to PONV and identify them. To do this we used the Risk for PONV Assessment Tool (Exhibit 1). By using the tool we then increased quality of care, patient safety, patient satisfaction and team collaboration. Based on the review of the evidence, the ASAPN guidelines have been successfully implemented at AAMC. One hundred patients were followed for PONV. By alerting anesthesia of those at high risk and by using prophylactic treatment only 3% of our patients experienced PONV at discharge. Nurses are now quantifying severity and implementing rescue interventions: hydration, appropriate anetimetics, and anticholinergics. Those with severe history are contacted prior to surgery for possible scopolamine patch. Implementing the ASAPN guidelines for the prevention and management of PONV was found to be effective in reducing PONV.

Synthesis

Contact Information
Denise Matteson BSN, RN, CAPA
Edward Surgical Pavilion
Anne Arundel Medical Center
2001 Medical Parkway
Annapolis MD 21401
410-481-5700
dmatteson@ahah.org