**Aromatherapy Using Pre-Mixed Essential Oils**

**A Non-Pharmacologic Intervention for Postoperative Nausea and Vomiting**

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**Background/Introduction**

**Post Operative Nausea and Vomiting (PONV)**

- Affects 20-30% of immediate post anesthesia patients
  - Report as the most distressing aspect of patients’ surgical experience
- Rated as more debilitating than postoperative pain and actual surgery
- Significantly affects postoperative morbidity including dehydration, electrolyte imbalances, aspiration, and wound dehiscence
- Major cause of patient dissatisfaction and delayed discharge of patients from PACU
- May result in unanticipated hospital admission, increasing health care costs

**Knowledge Focused Trigger**

- The American Society of PeriAnesthesia Nurses (ASPAN) 2006 Guidelines include aromatherapy as a non-pharmacologic treatment for PONV

**Problem Focused Trigger**

- Incidence of PONV is 15.5% among ambulatory postoperative patients at Houston Methodist Sugar Land Hospital (HMSL) from May-June, 2015

**PICO Question**

- For patients in the immediate postoperative period, does the use of aromatherapy as an initial rescue intervention compared to antiemetic medications relieve postoperative nausea and vomiting?

**Desired Outcome**

- Improve PONV management in the immediate postoperative period.

**Method**

- **Framework: Iowa Model of Evidence Based Practice**
  - Team Formation: PACU RNs (2) in collaboration with the Perioperative Clinical Practice Council
  - Review of literature
  - Pilot Implementation of Aromatherapy Administration for PONV
  - Baseline data collection from May to June, 2015
  - Development of Inclusion Criteria:
    - Outpatient surgery patients
    - >/= 18 years of age
    - Had general anesthesia
  - Development of Exclusion Criteria:
    - Patient refusal
    - Sensitivity to scents
  - Development of aromatherapy administration algorithm
  - Development of data collection tool
  - Staff education on:
    - Process of aromatherapy administration
    - Data collection
  - Pilot implementation from September to October, 2015
  - Evaluation of processes and outcomes
  - Practice guideline modified
  - Change in Practice
  - Processes and outcomes monitored for 6 months
  - Result Dissemination
    - Hospital-wide, Hospital System-wide, and Nursing Conferences

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**Results**

**Pilot Implementation:**

**Relief of PONV After 5 Minutes of Aromatherapy**

<table>
<thead>
<tr>
<th>Initial Complaint of PONV in PACU</th>
<th>n=43</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Change</td>
<td>44%</td>
</tr>
<tr>
<td>Total Relief</td>
<td>56%</td>
</tr>
<tr>
<td>Mild Nausea</td>
<td>63%</td>
</tr>
<tr>
<td>Moderate Nausea</td>
<td>19%</td>
</tr>
<tr>
<td>Severe Nausea</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Change in Practice:**

**Total Relief of PONV with Aromatherapy**

<table>
<thead>
<tr>
<th>Post-op Patients with PONV</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relief with Aromatherapy</td>
<td>15%</td>
<td>25%</td>
<td>24%</td>
<td>19%</td>
<td>32%</td>
<td>48%</td>
</tr>
<tr>
<td>Relief with Antiemetics</td>
<td>65%</td>
<td>55%</td>
<td>46%</td>
<td>31%</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>Total Relief</td>
<td>80%</td>
<td>70%</td>
<td>60%</td>
<td>50%</td>
<td>40%</td>
<td>32%</td>
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</table>

**Post Change in Practice:**

**Practice Modification:**

- Aromatherapy pods made readily available at bedside instead of medication room.

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**Algorithm for Post-op Aromatherapy**

1. Patient complains of PONV
2. Nurse offers aromatherapy
3. Instruct continued use of aromatherapy
4. Administer rescue medication
5. Aromatherapy pod sent with patient to inpatient unit or home

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**References**