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Aromatherapy: A Non-Pharmacological Intervention for the Prevention of Post-Operative Nausea and Vomiting

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AROMATHERAPY USING PRE- MIXED ESSENTIAL OILS: A NON-PHARMACOLOGIC INTERVENTION FOR POSTOPERATIVE NAUSEA AND VOMITING

Description and Purpose: Postoperative Nausea and Vomiting (PONV) occurs immediately for one third of all patients who have had anesthesia. PONV is one of the most commonly reported fears beside pain among patients undergoing elective surgeries. Some patients even consider it as more debilitating than the actual surgery itself. If prolonged, PONV significantly affect postoperative morbidity resulting in both physiological and psychological distress to patients and their families. When left untreated, PONV may result in prolonged hospital stay or even unanticipated admission leading to increase in patient dissatisfaction and overall health care cost. In this facility, the incidence of Postoperative Nausea and Vomiting (PONV) was 15.5% among ambulatory patients from May to June, 2015. The purpose of this Evidence Based Practice (EBP) Project was to survey the effectiveness of a nurse driven, non-pharmacological alternative intervention (Aromatherapy: using pre-mixed essential oils) as a rescue treatment for PONV in the immediate postoperative area and the goal was to include this nursing intervention as part of the multi-modal antiemetic therapy in the prevention of postoperative nausea and vomiting.

Methods/Evidence: Applying the Iowa Model of Evidence Based Practice, a two-member team was formed in collaboration with the Perioperative Clinical Practice Council and the Hospital- Wide Research and Evidenced Based Practice Council. Initial steps included development of an algorithm, inclusion/ exclusion criteria, and a data collection tool (using the Apfel Scoring System for patients' PONV Risk and Likert Scoring for the survey). Staff education focusing on administration algorithm and data collection ensued using a didactic power point presentation for the entire perioperative team including the anesthesia department. During the pilot implementation of this EBP Project between September to October 2015, 46 respondents were included in this EBP project, three patients were excluded following the exclusion criteria. Utilizing the data collection tool, a survey was done in the immediate post-operative period (Phase 1 Recovery) and continued into Phase 2 Admission-Observation-Discharge (AOD). AOD nurses also conducted a survey during their post op follow up phone calls to evaluate the effectiveness of aromatherapy within 24 hours after patient were discharged home. After a six month period, evaluation of processes and outcomes led to a practice guidelines modification. Pre-mixed aromatherapy med packs were made readily available at the bedside to ensure the immediate delivery of this alternative non-pharmacological rescue treatment to patients experiencing PONV. In December of 2016, Aromatherapy was offered to the general population in the immediate post anesthesia Phase 1 Recovery. A nursing satisfaction assessment was also done post pilot implementation.

Evaluation of the impact /effectiveness on the organization: Preliminary results showed that aromatherapy was more effective in treating mild nausea than moderate nausea, but was not able to totally relieve severe nausea. Respondents who did not achieve total relief from nausea had 3+ Apfel risk score for PONV and were treated with antiemetic medication/s. Among respondents, only 40% required antiemetic medication decreasing usage by 40% - 60% when compared to past practice. A steady increase in the number of patients experiencing complete relief from PONV with aromatherapy only was noted from December 2015 to June 2016. This led to increased patient satisfaction as evident by the Press Ganey Ambulatory Surgery Overall Patient Satisfaction Scores from 92.5% to 95.1% one year after complete hospital wide implementation. A survey of all Phase 1 and Phase 2 Postoperative nurses suggested that aromatherapy was easy to use, beneficial for patients and 100% recommended for

inclusion to the multi-modal therapy for PONV. In February of 2017, this cost-effective nursing initiative was presented to the eight- hospitals system wide General Medical Products Subcommittee for review and approval. In March of 2017, the use of aromatherapy for the prevention of PONV was unanimously approved by the Supply Chain Steering Committee for system-wide use.

Implications for nursing practice: With the success of this EBP Project, nurses in other departments within the hospital started trialing aromatherapy in different patient populations such as Chemotherapy and , labor and delivery patients. Favorable results of this EBP project also led to continued use of aromatherapy on all patients with PONV in the PACU and Day Surgery and even in the Intensive Care and Medical- Surgical Units. Aromatherapy is now a part of the System-wide Multi-Modal Antiemetic Therapy for the Prevention of PONV.

Title:

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Keywords:

Aromatherapy, Complementary Therapy and Non-pharmacological Treatment

References:

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Abstract Summary:

An evidence-based practice project focused on aromatherapy as an adjunct modality in prevention of post-operative nausea and vomiting during the immediate post-recovery period. Results showed a 40%-60% reduction of antiemetic medication usage and increased Press Ganey overall patient satisfaction scores among the Ambulatory Surgery population (92.5% to 95.1%).

Content Outline:

I. Introduction:

- Post Operative Nausea and Vomiting (PONV) affects 20-30% of immediate post anesthesia patients
- Reported 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 PACU2
- May result in unanticipated hospital admission, increasing health care cost

II. Knowledge Focused Trigger:

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

III. Problem Focused Trigger:

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

IV. PICOT 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?

V. Desired Outcome:

- Improve PONV management in the immediate postoperative period.

VI. 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

VII. Pilot Implementation Results:

- A total of 43 respondents were included in the EBP pilot implementation
- Results showed that aromatherapy was more effective in treating mild nausea than moderate nausea and was not able to totally relieve severe nausea
- Respondents who did not achieve total relief from nausea had 3+ Apfel risk score for PONV
- Among respondents, only 40% required antiemetic, a 60% decrease in antiemetic medication utilization compared to past practice.
- A survey data from Day Surgery and PACU nurses suggested that aromatherapy was easy to use, beneficial for the patients, and recommended for inclusion in the multi-modal treatment for PONV
- Favorable results of this EBP project prompted continued use of aromatherapy on AOD patients with PONV in the PACU.
- Full implementation on all post operative patients started on December. 2015.

VIII. Change in Practice Outcomes:

- Use of Aromatherapy as first rescue intervention for PONV, unless contraindicated, is fully implemented and adapted in Day Surgery and PACU.
- Utilization of aromatherapy pods was maximized when it was made readily available for nurses at bedside, cutting back on travel time spent by nurses when retrieving supplies from medication room.
- Continued request for Aromatherapy from admitted post-op patients.
- Patients requests Aromatherapy during their subsequent visits.
- Aromatherapy is now added as an adjunct therapy in the multimodal treatment for the management of PONV.
- Aromatherapy has been approved for systemwide utization in the entire Houston Methodist Hospital System.

IX. Result Dissemination Outcomes:

- Other departments (i.e. Labor and Delivery Unit (L&D)) started aromatherapy trial on obstetric populations
- Results has been presented to various local, state and national conferences either as a poster or podium presentation.

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