Organizational Culture and Readiness Assessment

Proposal/Problem Statement and Literature Review

Section A: Organizational Culture and Readiness Assessment

The organizational change is a method that involves planning and applications of changing behavioral, psychological, and structural in the pursuit of implementing evidence-based practice (EBP). An organization needs to cultivate a culture that strengthens and supports the nurse's values and beliefs on EBP to achieve common goal of successful implementation of EBP (Yoo, Kim, et. al, 2020). Identifying a priority issue in the unit that needed intervention to ensure patients safety can lead in to research in promoting the stakeholder and clinicians to create a solution that is supported with EBP.

Aside from the number one priority in the surgical unit is maintaining sterility to avoid infection, it is also a priority to provide warming patient before, during and after surgery. During a surgical procedure patient are vulnerable to experience a hypothermia, that require them for more oxygen demand and lead to complication such as infection and cardiovascular problem. Hypothermia is a body temperature less than 36°Celsius. The body temperature of patients who will undergo surgical procedures under general anesthesia generally decreases by 2–3° Celsius if preventative measures are not rendered. Some of the postoperative patients experienced shivering, decreased oxygen saturation, and noted to have cold hands and feet that requires an extended period of time in recovery to manage hypotension. I Conducted a survey from the management down to perioperative staff members to assess the readiness for organizational change. Out of 50 participants (perioperative manager, nursing educator, surgical doctor, and perioperative staff nurses and patient care assistants), only 40% gave a positive answer in their willingness to adopt the evidence-based practice of perioperative warming to prevent hypothermia. The appropriateness of change to improve patient outcomes is 100% significant to prevent patients from hypothermia. It provides comfort, prevent complications after surgery and minimizes hospitalization cost since warming patient also helps in preventing infection. The resources such as staffing, forced warm air machines, and warmed blankets are available in the perioperative unit 100%. Commitment and willingness to work towards the best practice for organizational change has a score of 40%. Support from perioperative management has a score of 50%. The hospital that I am associated with right now is a new branch of a bigger organization. It was acquired a year ago and the majority of the employees have been there for three or four decades. The organization has established a professional practice model of care that is aligned to the mission and vision of interdisciplinary care, innovation, research and evidence-based practice, clinical excellence, and leadership development, collaborative governance, quality metrics, and education.

Section B: Proposal/Problem Statement and Literature Review

PICOT Statement: Warming Patient Perioperatively to Prevent Hypothermia. The components of the PICOT question are P (population), I (intervention), C (comparison), O (outcome), and T (time). Patients undergoing surgical procedures under general anesthesia how forced-air warming compares to traditional warming helps in preventing hypothermia.

Where P= patients undergoing a surgical procedure under general anesthesia, I= forced-air warming, C=traditional warming, O= helps in preventing hypothermia

 Patients undergoing surgical intervention under general anesthesia are prone to experience perioperative decrease in core temperature in the first hour due to peripheral redistribution of body heat leading to inadvertent hypothermia. Hypothermia is associated with many detrimental physiologic alterations and increased morbidity. Postoperative hypothermia may also lead to increased oxygen consumption causing severe complications. Efforts to attenuate the incidence of perioperative hypothermia will greatly benefit the patient’s surgical and anesthetic outcomes.

Literature Review

To identify pertinent and reputable articles related to my topic, keywords used are used for research are hypothermia, surgical patients, surgery, perioperative, body temperature, heating, normothermia, low, high, forced air, complications, infections, conventional.

Source 1:

The purpose of this study is to gain new knowledge about the effect of using forced-air warming blankets to prevent hypothermia during surgery. This study from (Broback, et. al, 2018) stated that active warming with a forced-air warming blanket is the most effective warming method for preventing hypothermia by redistributing heat from the core to peripheral parts of the body in surgical patients. Body heat loss is very common after general anesthesia during surgery. There were 27-383 participants who underwent elective surgery under general anesthesia, and the majority had an ASA classification of ≤ III that indicates a patient’s morbidity rate that shows baseline physical condition prior to induction of anesthesia. Three studies conducted, and one of the results of the study showed that preoperatively warming the patient one hour prior to induction of general anesthesia decreases the accidental hypothermia in the surgical patient. Seven of the studies conducted included preoperative warming and perioperative warming with a forced-air warming blanket showed that preoperative warming for 10, 20 and 30 minutes lessened the risk of perioperative hypothermia and postoperative shivering and the core temperature was significantly above compared to the control group. This study stated that by using a forced air warming blanket hypothermia can be prevented. It has hard to judge the weight of the study due to the different factors that may affect the result such as age, weight, and illness.

Source 2:

Many patients tend to be hypothermic during surgery that leads to more complications, longer stay in the hospital, and higher hospital charges. Out of 30 articles, seven of which were selected for analysis. According to Hong-xia, et al 2010 the administration of warm IV fluids helps in keeping normal core temperature and shivering during abdominal surgeries. A combination of other techniques will further lessen the occurrence of hypothermia. A study by Galvão, et al 2010 found out that active warming methods circulating water garments (CWG) are more effective in keeping the temperature of patients who will undergo surgery than forced-air, radiant heat or carbon-fiber warming systems. However, forced-air warming systems (convection) are more effective than passive warming systems and radiant heat or carbon-fiber warming systems (Guedes Lopes, et. al, 2015).

Another study conducted on the forced-air blanket at 38-degree Celsius to assess the efficacy of the method in different periods to prevent hypothermia. The study also assesses the adverse effects of using a forced-air blanket at 38degree Celsius. There were 60 participants: Gcont (n=15) patients were not warmed with a forced-air blanket; Gpre (n=15) – a forced-air blanket for 30 min. before anesthetic induction; Gintra (n=15) – forced-air blanket after anesthetic induction up to 120 minutes; Gtotal (n=15) – forced-air blanket before and after anesthetic induction. The research concluded that forced-air blanket to prevent hypothermia for orthopedic surgeries if it is done 30min before anesthetic induction had no adverse effect found. Therefore, the forced-air system and circulating water garments have proven to be more effective. A combination method of warming patients is more obviously more effective than a single method (Bernardis, et., al, 2009).

Source 3:

Hemiarthroplasty is a recommended treatment for adults aged over 60 years. The postoperative infection affects up to 3% of patients that may be associated with inadvertent perioperative hypothermia, which itself is a risk for postoperative infection. To provide a solution the recommendation is to warm the patient 30 min or more prior to the procedure by using a forced-air warming (FAW) and resistive fabric warming (RFW) both are effective, but the study wants to find out has the lowest infection occurrence. The Reducing Implant Infection in Orthopedics (RIIiO) study seeks to compare infection rates with FAW versus RFW post hemiarthroplasty for hip fractures.

Methods: RIIiO is a parallel-group, open-label study randomizing hip fracture patients over 60 years of age who are undergoing hemiarthroplasty to RFW or FAW (Kümin, et. al, 2018). Participants for this study are being observed for up to 3 months. Definitive deep surgical site infection within 90 days of surgery, the primary endpoint, is determined by a blinded endpoint committee. A systematic review of 67 RCTs that is related to warming systems from 1964 to October 2015 could not prove whether FAW or RFW was more effective. An observational study from one hospital for a 2.5-year period stated that the risk of developing deep infection up to 60 days after surgery was higher for patients treated with FAW than RFW, but there were significant confounding factors in this study (Kümin, et. al, 2018. Decreased infection rate related to the use of FAW has only been seen in colorectal surgery that is totally different from orthopedic trauma surgery. The RIIiO study will make a further study on what is the best choice in the warming method for patients undergoing surgery to prevent infection-related to hypothermia.

Source 4:

The study of comparison of Forced-air Warming Systems and Intravenous Fluid Warmers in preventing perioperative hypothermia on pediatric patients under six years of age. Method: There were two hundred pediatric patients from 0-6 years of age who underwent elective surgery. Group 1 was warmed with a forced-air warming system in the operating room. Group 2 was warmed with intravenous fluid and blood warming systems in the operating room. The entire period the heart rate, SpO2, end Tidal CO2 and esophagus temperature values were recorded at 10-minute intervals. And also, the number of participants, who needed rescue warming, the starting time, and the duration of rescue warming were recorded. The length of time that patient is under anesthesia, the duration of surgery, and the time. The study found out that the fluid warming systems are as effective as forced-air warming systems in preventing the occurrence of perioperative hypothermia.

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