



QUALITY & SAFETY MATTERS

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Evaluation of Oral Sucrose as an Analgesic for Male Neonatal Circumcision

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Neonatal circumcision is one of the oldest and most widely practiced surgical procedures performed today with 77 percent of newborn males in America circumcised in 2010. Due to neonates' under-developed systems, general anesthesia and narcotic analgesia are inappropriate, and often infants undergo circumcision without any anesthesia; however, neonates are developed enough to feel pain, as all necessary pain receptor pathways are anatomically present at birth. Because many newborns do not receive analgesia during this painful procedure, and various inexpensive analgesics are available, a safe and effective pain control method needs to be identified and implemented in medical and nursing practice. According to the available evidence, sucrose alone is not effective at controlling neonatal pain during male circumcision but is, however, an effective synergist to other analgesic methods.

Sucrose alone was found through several studies to be ineffective at controlling pain experienced by newborns during circumcision. So ineffective, in fact, that its analgesic effects were equivalent to that of sterile water. In multiple studies, the use of oral sucrose alone resulted in the highest infant pain scores out of all analgesic methods studied; however, sucrose has been found to have substantial synergistic effects when used in combination with other analgesic methods such as eutectic mixture of local anesthetics (EMLA) or dorsal penile nerve block (DPNB). Oral sucrose, when administered with another analgesic, resulted in lower neonatal pain scores than when either analgesic was used alone. Further research is necessary to determine which analgesic would result in the greatest pain relief when combined with oral sucrose.

The practice of using sucrose as the sole pain relief method during neonatal circumcision should be discontinued. Furthermore, based on the overwhelming evidence of sucrose's synergistic effects, a protocol should be initiated that includes utilizing oral sucrose as an additive to all other analgesic methods (i.e. EMLA, DPNB) during neonatal circumcision.

Use of Non-pharmacological and Pharmacological Therapies for Adolescent Depression

By: Margaret Heck, Mia Miller, Averie Newton, Morgan Pruitt and Kaitlin Steed

In 2017, 3.2 million adolescents had one or more debilitating depressive episodes and this number has steadily increased over the past 2 years. In addition, in young adolescents (11-15 years), 18 percent have experienced symptoms of depression as of 2019. Currently the most common forms of treatment are the use of medication, psychotherapy or a combination of both. Choosing to implement a combination therapy is more helpful, rather than using only one type of treatment.

A standard treatment protocol has yet to be established. There is a wide range of current treatments for those diagnosed with adolescent depression. Factors including socioeconomic status, age, gender and personal choice of the patient as well as the type of health care provider have a large influence on the type of treatment prescribed to each individual. Therefore, a more refined treatment structure is needed. Cognitive behavioral therapy, such as therapeutic conversation, is a common psychological method used to alleviate depressive symptoms. This helps patients by altering their thought processes to a more positive way of thinking. Pharmacological therapy uses antidepressant medications such as SSRIs and NRTIs to help modify the possible chemical imbalance present in each patient. Evidence finds that the combination of both therapies is the best choice of treatment due to targeting both the physical and psychosocial sources of behavior.

After finding that combination therapies are the most successful, our EBP team recommends initiating a checklist that will assist in earlier recognition of signs and symptoms by psychiatric nurses allowing physicians the ability to diagnose depression earlier. Rapid recognition leads to earlier diagnosis, increasing the number of positive patient outcomes.

Reducing the Risk of Perioperative Hypothermia with Forced-Air Warming

By: Haley Hefelfinger, Makenzie Miller, Mathew Tamble, Vanessa Velazquez and Justin Wren

Nearly 20 percent of all surgical patients experience a hazardous operating room phenomena known as perioperative hypothermia. This is defined as hypothermia caused during the surgical process as a result of the patient's core temperature dropping below 37 °C. A reduction in the core body temperature below 37 °C disrupts the normal function and can lead to many serious, and potentially deadly, complications. These complications include a threefold increase in infection post-surgery, decreased blood flow that can exacerbate chronic heart conditions and changes in platelet formation.

Currently, there are no methods in place that are standardized to prevent the development of perioperative hypothermia in the hospital setting. However, researchers have found the use of pre-warming methods to be an effective way to combat this very preventable complication. The use of materials like forced air warming gowns have dramatically reduced the incidence of perioperative hypothermia. These gowns are given to patients to wear before surgery and warm air is blown through vents in the gown to keep the patient warm before the procedure.

Summation of the evidence shows that forced-air warming in the preoperative setting greatly reduces the risk of perioperative hypothermia. Hypothermic conditions can lead to costly and potentially fatal complications but can be prevented with proper protocols. With such protocols in place, patient safety and comfort increase while hospital costs decrease. Of the pre-warming methods explored, the consensus was that forced-air warming was the most effective at maintaining normothermia.

As a team we gathered evidence that suggests pre-warming a patient with forced-air warming preoperatively can reduce the risks of developing perioperative hypothermia. We recommend initiating a standard protocol for all patients who will be going into surgery to be pre-warmed using a forced-air warming gown to raise their core body temperature 30 minutes before entering the OR. This protocol will help maintain normothermia in the perioperative setting to give patients their best chance at having a successful recovery.

Best Practices for Nurse to Nurse Handoffs

By: Hannah Allen, Jordan Budak, Katherine Cox, Kira Morgan and Ida Trunick

Nursing handoffs significantly impact the outcome of patients in a healthcare facility with The Joint Commission finding 60 percent of 2000 analyzed sentinel events were primarily caused by miscommunication. Most common factors leading to miscommunications are a lack of time, noise and interruptions, and lack of patient engagement. These items affect the quality of the handoff, leading to incorrect or insufficient information shared from nurse to nurse. This increases the risk for medication errors, falls, delayed treatment and death, which ultimately affects patient safety as well as the facility's bottom line.

The current format of nurse-to-nurse handoffs varies widely. Handoffs occur in different settings, with different tools and focuses. Not only are there differences between departments, there are differences amongst nurses within departments. Handoffs may take place in or out of the patient's room and an electronic health record (EHR) is used in some cases but not in others. Also, information shared in each handoff is inconsistent which may lead to low quality exchanges. Overall, the current state of practice is that there is no consistent practice.

Evidence shows that standardization of nursing handoffs, and ensuring they are performed at the bedside, improves the quality of patient care and increases patient and family involvement. The clinical environment also positively impacts the handoff process: positive relationships between staff members can ensure accountability. In addition, proper training increases overall support of standardized tool utilization.

It is commonly agreed that the standardization of handoffs improves the quality of overall patient care. The standardization of the process should include a clear method for providing handoffs, a concise and thorough tool that has been validated and proper training. Based on these parameters, our recommendations to improve nurse to nurse handoffs include the implementation of bedside report, utilizing a hospital standardized electronic tool that is integrated with the hospital's EHR and implementing training for all nurses.

