Title:

Identifying Best Practice for Healthcare Providers Caring for Autistic Children Perioperatively

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References

Ahmed, M.I., Farrell, M.A., Parrish, K., & Karla, A. (2011). Preoperative anxiety in Children risk factors and non-pharmacological management. Anesthesia, 2, 153-170.

Ahmed, S.S., Unland, T., Slaven, J.E., Nitu, M.E., Rigby, M.R. (2014). Successful use of intravenous dexmedetomidine for magnetic resonance imaging sedation in autistic children. Southern Medical Journal, 107 (9), 559-564.

Ambardekar, A.P., Litman, R.S., Schwartz, A.J. (2013). Stay, give me your paw. The benefits of family-centered care. Anesthesia-Analgesia, 116 (6), 1314-1316.

Autism Speaks. (2016). Phlebotomy Tool Kit for Providers Treating Children With autism. Taking the Work out of Blood work: Helping Your Patient with Autism. Retrieved from http://www.autismspeaks.org

Autism Speaks. (2016). Treating Children with Autism Spectrum Disorders. A Tool Kit for Dental Professionals. Retrieved from http://www.autismspeaks.org.

Arnold, B., Elliott, A., Laohamroonvorapongse, D., Hanna, J., Norvell, D., Koh, J. (2015). Autistic children and anesthesia: is their perioperative experience different? Pediatric Anesthesia, 25, 1103-1110.

Drake, J., Johnson, N., Stoneck, A.V., Martinez, D.M., Massey, M. (2012). Evaluation of a coping kit for children with challenging behaviors in a pediatric hospital. Pediatric Nursing, 38 (4), 215-221.

Fine, A.H. (Ed.). (2015). Handbook on animal-assisted therapy. Foundations and guidelines for animal-assisted interventions. London: Elsevier.

Goodard, A.T., Gilmer, M.J. (2015). The role and impact of animals with pediatric patients. Pediatric Nursing, 41, (2), 65-71.

Johnson, N.L., Rodriguez, D. (2013). Children with Autism Spectrum disorder at a pediatric hospital: a systematic review of the literature. Pediatric Nursing, 39 (3), 131-140.

Kopecky, K., Broder-Fingert, S., Iannuzzi, D., Conners, S. (2013). The needs of hospitalized patients with autism spectrum disorders: a parent survey. Clinical Pediatrics, 52 (7), 652-660.

Lee, J.H., Jung, H.K., Lee, G.G., Kim, H.Y., Park, S.G., Woo, S.C. (2013). Effects of behavioral intervention using smartphone application for preoperative anxiety in pediatric patients. Korean Journal Antehsiology, 65 (6), 50

Lindberg, S., Post, I. V., Eriksson, K. (2012). The experiences of patients of children with severe autism in connection with their children's anesthetics, in the presence and absence of the perioperative dialogue: a hermeneutic study. Scandinavian Journal of Caring Sciences. 26, 627-634.

Murthy, R., Bearman, G., Brown, S., Bryant, K., Chinn, R., Hewlett, A., George, G., Goldstein, E.J.C., Holzmann-Pazgal, G., Rupp, M.E., Wiemken, T., Weese, J.S., Weber, D.J. (2015). Animals in healthcare facilities: recommendations to minimize potential risk. Infection Control & Hospital Epidemiology, 36 (5), 495-516.

Sahiner, N.C., Bal, M.D. (2015). The effects of three different distraction methods on pain and anxiety in children. Journal of Child Health Care, 1-9.

Seo, K.H., Jung, H.S., Kang, E.G., Kim, C.J., Rhee, H.Y., Jeon, Y.S. (2014). Sedation using 5% lidocaine patches, midazolam and propofol in a combative, obese, adolescent with severe autistic disorder undergoing brain magnetic resonance imaging. Korean Journal Anesthesiology, 67 (6), 421-424.

Short, J.A., Calder, A. (2013). Anesthesia for children with special needs, including autistic spectrum disorder. Continuing Education in Anesthesia, Critical Care & Pain, 13 (4), 107-112.

Taghizadeh, N., Davidson, A., Williams, K., Story, D. (2015). Autism spectrum disorder (ASD) and its perioperative management. Pediatric Anesthesia, 25, 1076-1084.

Thompson, D. G., Tielsch-Goddard. (2013). Improving management of patients with autism spectrum disorder having scheduled surgery: optimizing practice. Journal of Pediatric Health Care, 28 (5), 394-403.

Vagnoli, L., Caprilli, S., Vernucci, C., Zagni, S., Mugnai, F., Messeri, A. (2015). Can presence of a dog reduce pain and distress in children during venipuncture? Pain Management, 16 (2), 89-95.

Abstract Summary:

The purpose of this evidence based practice project is to identify the most effective strategies for healthcare providers managing pediatric surgical patients with Autism Spectrum Disorder and to incorporate them into easily accessible care plans for all providers to give individualized treatment. **Learning Activity:**

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
The learner will be able to identify three categories of interventions the healthcare provider can employ when individualizing care for the autistic pediatric surgical patient.	According to the scientific evidence, best practice interventions for healthcare providers include medication interventions, distraction/play therapy interventions and management interventions. Each intervention will be described in detail.
The learner will be able to describe each category of interventions the healthcare provider can employ when individualizing care for the autistic pediatric patient.	According to the scientific evidence, medication interventions include dexmedetomidine, midazolam, Clonidine and ketamine. Distraction/play therapy interventions include play therapy visits,

animal assisted therapy and personal comfort items. Management interventions include parental presence in the PACU and
preregistration prior to surgery.

Abstract Text:

Purpose: Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by abnormal social interaction, communication difficulties and stereotypical behavioral patterns (Arnold et al, 2015). Frequently autistic children have difficulty tolerating change and encounters with unfamiliar people and environments may be particularly threatening (Lindberg et al, 2012). In addition, children with ASD can have co-morbidities including intellectual and motor difficulties, mental health problems, epilepsy and sleep disturbances (Taghizadeh et al, 2015). The purpose of this evidence based practice project is to identify the most effective strategies for healthcare providers managing pediatric surgical patients with ASD and to incorporate them into easily accessible electronic care plans for all providers to give individualized treatment.

Method: The nurse researcher was consulted by clinical staff for help searching best practice recommendations for healthcare workers who care for autistic children undergoing outpatient surgical procedures at a large urban pediatric healthcare organization. A literature search was conducted via PubMed and CINAHL and included psychological, nursing and anesthesia journals. The majority of relevant articles were published during the past five years (2011-2016). The key terms used were: Coping perioperative surgery, coping strategies for preoperative/perioperative anxiety in developmentally delayed children, stress coping strategies for pediatric surgical patients, preparing developmentally delayed children for surgery, preparing autistic children for surgery. In addition, MeSh terms were used: perioperative or postoperative anxiety/prevention limited to children, perioperative adaption, psychological limited to children. The nurse researcher in collaboration with the interdisciplinary team then created an evidence summary table.

Results: The recommendations for best practice based on the literature review are used as the basis for the development of an individualized electronic care plan for each autistic patient. Effective strategies for healthcare providers fall broadly into three categories: medication interventions, distraction/play therapy interventions and management interventions. Medications including Dexmedetomidine with or without midazolam are recommended as an effective sedative in this population with few side effects as well as Clonidine and Ketamine (Taghizadeh et al, 2015). Evidence also strongly supports play therapy and distraction techniques as effective interventions in patients with autism including play activities with Child Life therapists, animal assisted therapy, personal comfort items and visual aids or story boards. (Vagnoli et al, 2015; Goddard et al, 2015; Sahiner et al, 2015; Lee et al, 2013). Lastly, evidence supports strategies that control the external environment and stimuli as well as individualized safety precautions and communication techniques shown to be effective with the autistic child. These strategies include parental presence in the PACU, and preregistration prior to surgery to avoid the noisy waiting area (Johnson et al, 2013; Drake et al, 2012). These plans are coupled with individual patient information given by parents.

Conclusions/Implications for Practice: The information provided by families to help the perioperative team align with patient and parent preferences, is obtained prior to surgery via questionnaire or phone call and is incorporated into the perioperative care plan housed in the electronic medical record. This "coping plan" is easily accessed by the multiple disciplines involved in the care of these vulnerable patients and is used to meet the patient's specific needs before and after surgery. This collaborative effort results in the use of strategies based on current evidence leading to better communication, individualized care and a more positive patient experience by autistic patients and parents during the surgical experience.