

What additional sensory cautions and individualized interventions would be beneficial to a child with autism spectrum disorder in a hospital setting compared to traditional pediatric floor interventions to improve patient stays and compliance with procedures?

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Abstract

Going to the hospital is very stressful but it can be almost impossible for patients with autism spectrum disorder (ASD). These children are at a larger risk for being admitted to the hospital because of periodic and chronic health complications and possible self harm or aggressive behaviors. Many hospitals are making strides to improve these children's hospital experiences. Interventions include improving training and finding ways to make the environment sensory friendly. Implementing these tactics into the future can greatly improve patient outcome and encourage people with ASD to come back to healthcare environment when needed and not be as afraid.

PICO Question

What additional sensory cautions and individualized interventions would be beneficial to a child with autism spectrum disorder in a hospital setting compared to traditional pediatric floor interventions to improve patient stays and compliance with procedures?

Population- pediatric patients on the autism spectrum
Intervention-sensory cautions and individualized interventions
Comparison-traditional pediatric hospital floors
Outcome-improve patient stays and compliance with procedures?

Introduction

Having to go to the hospital is a stressful experience for almost everyone. However, for some patients, it can be a very scary experience. One patient population that may have a larger difficulty in this environment are children with autism spectrum disorder (ASD). This "is a developmental disorder that affects communication and behavior" (NIMH » *Autism Spectrum Disorder*, n.d.). There are a large variation of symptoms that can be present, and this is why it is a spectrum disorder (NIMH » *Autism Spectrum Disorder*, n.d.). Because of this wide variation in symptoms, it is important to have many ways to improve the environment for these pediatric patients. To aid the improvement of care for children with Autism, early recognition of many possible symptoms is very important. (Christensen et al., 2018)



Child received personalized treatment during blood draw to help him remain calm.

Florida Hospital Expands Program for Autism and Special Needs – Southern Tidings. (n.d.). Retrieved April 19, 2020, from <https://www.southerntidings.com/feature/florida-hospital-expands-program-for-autism-and-special-needs/>

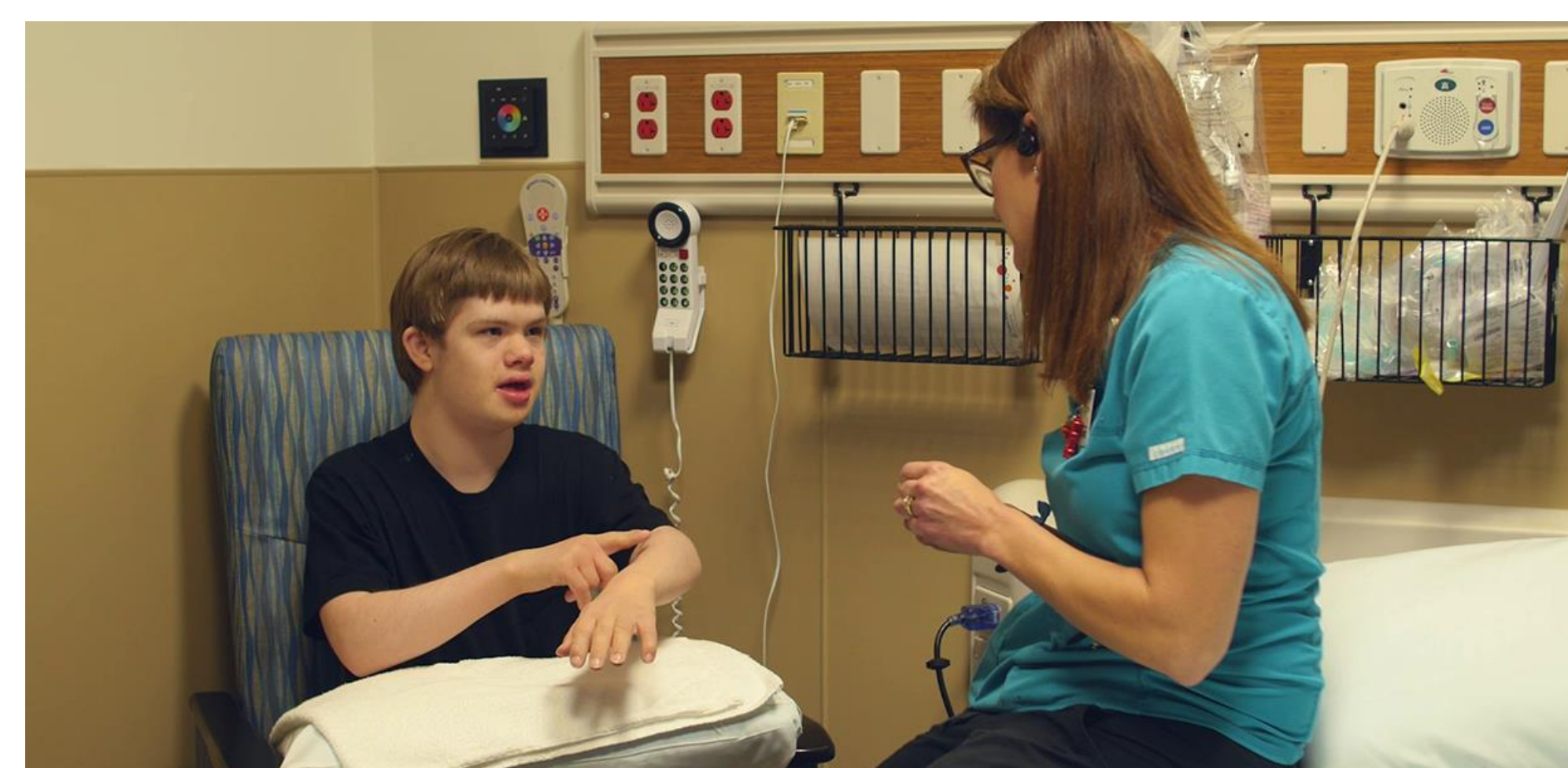
Background Information

Dsm-5 states three criteria for diagnosis of ASD "difficulty with communication and interaction with other people, restricted interests and repetitive behaviors, and symptoms that hurt the person's ability to function properly in school, work, and other areas of life"(NIMH » *Autism Spectrum Disorder*, n.d.). As stated before, these children can experience varying degrees of these three criteria, and this is why it is referred to as a spectrum. Part of why it is crucial that they receive a diagnosis is that, "delays in the initiation of a first developmental evaluation might adversely affect children by delaying access to treatment and special services that can improve outcomes for children with ASD," (Christensen et al., 2019). There are studies that show children that have Autism are more likely to experience injury while in the hospital. Children that have ASD are often treated with psychiatric care or diagnosis. "Preadolescent youth with ASDs were more likely to have utilization for psychiatric concerns versus comparison youth across multiple outcomes, including for any utilization with a primary psychiatric diagnosis, inpatient visits with a psychiatric diagnosis, and inpatient visits on a psychiatric unit," (Schlenz et al., 2015, p.2384).

Many children that have Autism have more than one diagnosis that are psychiatrically related. "At particular risk for psychiatric hospitalization are children with ASD who exhibit self-injurious and aggressive behaviors, have depression or obsessive-compulsive disorder, are prescribed psychotropic medications, received an ASD diagnosis late in life, have sleep problems, or come from single parent households,"(Kuriakose et al., 2018.).

Methods

In order to find relevant literature articles, we first reviewed databases for information. We started with broader searches and narrowed down to our topic of ASD interventions for hospital settings. We then appraised, analyzed, and synthesized the literature. After pulling out the relevant information for our research, we ensured we had proper citation information for each article.



A child life specialist works with this child to learn trigger points and to alleviate stressors.

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Evaluation and Analysis

This patient population "may experience periodic and chronic health challenges, in addition to their primary developmental social and communication problems" (Muskat et al., 2015). Most often children that have ASD have a difficult time in the hospital due to many factors. One being the undertraining of staff on how to care for someone that has Autism. A study showed improved patient outcomes when there was adequate training of staff members, "a multi-disciplinary team, evidence-based behaviors management strategies, often implemented or supervised by a specialist such as a Board Certified Behavior Analyst (BCBA), and intensive caregiver involvement in treatment," (Kuriakose et al., 2018, p. 4083).

Environmental support has proven to be effective, by shortening the length of stay for these patients. Also, while structured schedules tend to be used at home to comfort these children, it is also very important to adhere to similar structures in the hospital. Including sensory gyms and quiet rooms are two interventions that can be beneficial. Picture cards, videos, and mobile apps have shown to reduce anxiety and overstimulation in a dental office, (Elmore et al., 2016) these interventions could be used in a hospital setting as well. It would benefit staff members and the patient, these interventions could be used in stressful times, during medication administration, or procedures.

Other interventions that are commonly used include, "gentle teaching", sensory integration, cognitive behavioral modification, assistive technology, and social stories," (Ming-Yeh et al., 2018, p. 1093). Many of these interventions are introduced to help these patients understand how to interact with people and behave. For example, social stories are stories that are told to children that have Autism to help them understand how to appropriately react and behave.

Many hospitals have started working towards these sensory friendly environments. The Children's Hospital at Tristar Centennial piloted an autism and sensory friendly emergency room (figure 4.). Their staff is specifically "trained in sensory disorders with a dedicated room" (Blog, 2019). All that is required is a form is filled out by family to notify their staff about the sensory disorder and what that child's specific stressors and communication abilities are (Blog, 2019).

These changes include the following:

equipping the ER with quiet rooms upon admittance to help decrease the stimulation for the child, changing the fluorescent light fixtures, which can buzz or hum, to LED (Light Emitting Diode) lighting and adding a dimmer function to lower the brightness to the child's comfort level, securing projectors that project different patterns of light on the ceiling that are soothing (figure 4.), providing noise canceling headphones, shifting the monitors to ring at the nurse's station instead of the patient rooms, and supplying softer gowns. (Blog, 2019)



Figure 3.
Blog, H. T. (2019, April 2). *Sensory-friendly pediatric ER inspires awareness and acceptance*. HCA Today. <https://hcatodayblog.com/2019/04/02/sensory-friendly-pediatric-er-inspires-awareness-acceptance/>

Conclusion and Future Implications

There are many factors that impact the care of children with Autism in the hospital setting. Many of the factors start outside of the hospital. Children that are exposed to more stimuli may have an easier transition to the hospital. When parents recognize the hallmarks characteristics of Autism earlier, there has been improved outcomes and care. It is also important to note that while a child one works with may exhibit one or more of the signs of ASD, they may not be diagnosed. Regardless, all pediatric patients can benefit from interventions to relieve stress. Improving awareness and training in the hospitals can improve outcomes and keep children on regular pediatric floor. Transitioning at home interventions into the hospital can improve outcome for these patients and place parents and children at ease. Because of the prevalence of this diagnosis, many healthcare providers need to be better equipped to handle these patients to improve their outcomes and stay. Implementing these tactics improve these patient's experiences, making it easier to perform tasks and encouraging confidence in healthcare settings.

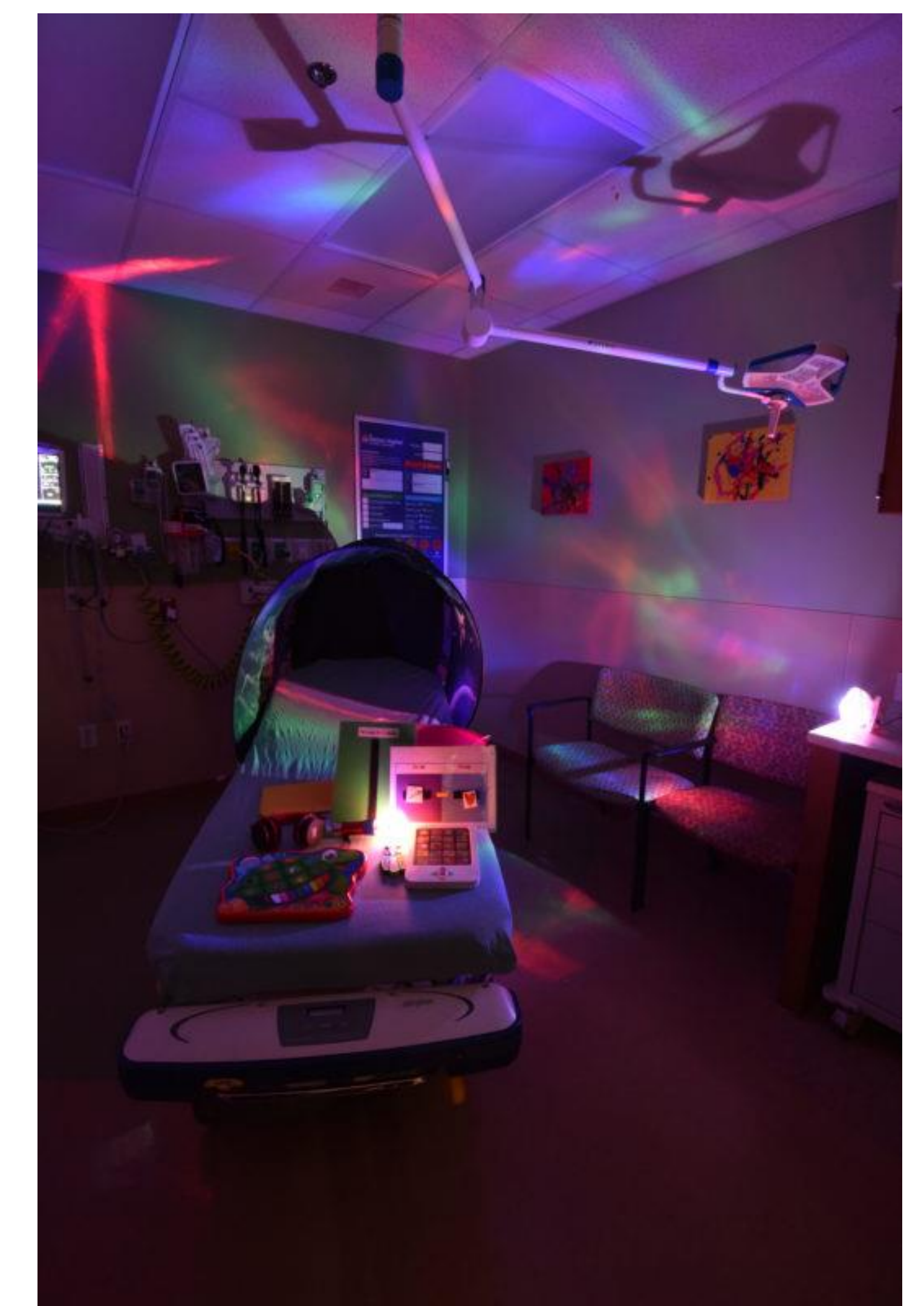


Figure 4.
Blog, H. T. (2019, April 2). *Sensory-friendly pediatric ER inspires awareness and acceptance*. HCA Today. <https://hcatodayblog.com/2019/04/02/sensory-friendly-pediatric-er-inspires-awareness-acceptance/>

References

- Blog, H. T. (2019, April 2). *Sensory-friendly pediatric ER inspires awareness and acceptance*. HCA Today. <https://hcatodayblog.com/2019/04/02/sensory-friendly-pediatric-er-inspires-awareness-acceptance/>
- Christensen, D. L., Braun, K. V. N., Baio, J., Bilder, D., Charles, J., Constantino, J. N., Daniels, J., Durkin, M. S., Fitzgerald, R. T., Kurzius-Spencer, M., Lee, L.-C., Pettygrove, S., Robinson, C., Schulz, E., Wells, C., Wingate, M. S., Zahorodny, W., & Yeargin-Allsopp, M. (2018). Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years—Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2012. *MMWR Surveillance Summaries*, 65(13), 1–23. doi:10.15585/mmwr.ss6513a1
- Elmore, J. L., Bruhn, A. M., & Bobzien, J. L. (2016). Interventions for the Reduction of Dental Anxiety and Corresponding Behavioral Deficits in Children with Autism Spectrum Disorder. *American Dental Hygienists' Association*, 90(2), 111–120.
- Hsieh Ming-Yeh, Lynch Georgina, & Madison Charles. (2018). Intervention Techniques Used With Autism Spectrum Disorder by Speech-Language Pathologists in the United States and Taiwan: A Descriptive Analysis of Practice in Clinical Settings. *American Journal of Speech-Language Pathology*, 27(3), 1091–1104. doi:10.1044/2018_AJSLP-17-0039
- Kuriakose, S., Filton, B., Marr, M., Okparaek, E., Cervantes, P., Siegel, M., Horwitz, S., & Havens, J. (2018). Does an Autism Spectrum Disorder Care Pathway Improve Care for Children and Adolescents with ASD in Inpatient Psychiatric Units? *Journal of Autism and Developmental Disorders*, 48(12), 4082–4089. doi:10.1007/s10803-018-3666-y
- Muskat, B., Burnham Riosa, P., Nicholas, D. B., Roberts, W., Stoddart, K. P., & Zwaigenbaum, L. (2015). Autism comes to the hospital: The experiences of patients with autism spectrum disorder, their parents and health-care providers at two Canadian paediatric hospitals. *Autism: The International Journal of Research and Practice*, 19(4), 482–490. doi:10.1177/1362361314531341
- NIMH » *Autism Spectrum Disorder*. (n.d.). Retrieved April 19, 2020, from <https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml>
- Schlenz, A. M., Carpenter, L. A., Bradley, C., Charles, J., & Boan, A. (2015). Age Differences in Emergency Department Visits and Inpatient Hospitalizations in Preadolescent and Adolescent Youth with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders*, 45(8), 2382–2391. doi:10.1007/s10803-015-2405-x