BENDING THE VALUE CURVE

Opportunities to Improve Inpatient Care for Children With Behavioral Comorbidities

Melanie Rudnick, MD,[a,b] Katherine Henry, MD,[c] Margaret Trost, MD[d,e]

CASE REPORT

A 14-year-old girl with autism spectrum disorder (ASD), intellectual disability, aggressive behavior, and constipation presented to the emergency department (ED) with her aunt and uncle (legal guardians), with 3 days of worsening aggression and abdominal pain. Caregivers reported escalating aggression over the last few months despite regular psychiatric follow-up and titration of her psychotropic medications. She had 2 ED visits during this time for similar complaints, was diagnosed with constipation, and was discharged from the hospital after receiving an enema. Three days before this presentation, she began hitting and scratching herself and caregivers and so was brought to the ED because they felt unsafe caring for her at home.

In the ED, vital signs were within normal limits. She was alert but was withdrawn, delayed, and nonverbal, and she was intermittently crying, scratching, and hitting herself and bystanders. Her abdomen was tender in the lower quadrants. The remainder of her examination was unremarkable. An abdominal radiograph demonstrated a significant stool burden. She was admitted for a bowel cleanout and adjustment of her psychotropic medications.

On admission, she was placed in an enclosed bed with one-to-one supervision by a dedicated staff member because of aggressive behavior. She was transitioned to an oral bowel regimen after an initial bowel cleanout and stooling well with resolution of abdominal pain by hospital day 3.

The inpatient psychiatry team was consulted for escalating aggressive behaviors. In discussion with her primary outpatient psychiatrist, a new pharmacologic regimen was started to manage her aggression and agitation. Despite these changes, she continued having behavioral outbursts (hitting, kicking, and scratching multiple care providers and herself) leading to frequent use of physical and chemical restraints to protect all involved parties. She remained withdrawn and agitated, with no improvement in behavior after 5 days on the new medication regimen. On day 6, further adjustments were made to the medication regimen; social work was consulted to assist with placement in a long-term psychiatric care facility.

Her medications were adjusted over the next 4 days while placement was sought. Ultimately, no care facilities were identified that would accept this patient. Although her behavior slightly improved on the new medication regimen, she continued having intermittent aggressive outbursts, making it difficult to provide appropriate care (ie, bathing, administering medications, checking vital signs).

[a]Division of Hospital Medicine, Department of Pediatrics, Connecticut Children's Medical Center, Hartford, Connecticut; [b]Department of Pediatrics, School of Medicine, University of Connecticut, Farmington, Connecticut; [c]Pediatric Residency Program and [d]Division of Hospital Medicine, Department of Pediatrics, Children's Hospital Los Angeles, Los Angeles, California; and [e]Department of Pediatrics, Keck School of Medicine, University of Southern California, Los Angeles, California

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Address correspondence to Melanie Rudnick, MD, Division of Hospital Medicine, Department of Pediatrics, Connecticut Children's Medical Center, 282 Washington St, Hartford, CT 06106. Email: mrudnick3@gmail.com

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On day 11, a family meeting was held. The patient's caregivers expressed concern that the hospital environment was exacerbating her agitation and conveyed their desire to bring her home. She was discharged from the hospital the next day with her caregivers after establishing close outpatient psychiatric follow-up. She had one subsequent admission 6 weeks after discharge for constipation leading to increased aggression in the setting of noncompliance with her prescribed home bowel regimen. She was discharged after completing bowel cleanout and, to our knowledge, has been well controlled on her current medications without need for ED visit or readmission for constipation or increased agitation or aggression.

DISCUSSION

Children with ASD and other psychiatric diagnoses who are hospitalized often experience a longer than expected length of stay (LOS) because of behavioral or mental health concerns.[1] From 2005 to 2014, hospitalizations of children with a medical diagnosis and a psychiatric codiagnosis increased 160.5%, with a concomitant 112% increase in LOS.[1] A psychiatric codiagnosis for medical or surgical admission to a pediatric inpatient unit was associated with an additional 90 million dollars of national hospital costs annually.[2] Children with ASD also often have difficulties with communication, new environments, and excessive stimuli, all components of hospitalization. Thus, hospitalization can often exacerbate these challenges for children and their families.[3,4] In an effort to improve our own knowledge and quality of care provided to similar patients, we reviewed 3 components of the medical system relevant to patients with ASD and other behavioral concerns: (1) training and education, (2) multidisciplinary inpatient care models, and (3) the status of inpatient psychiatric facilities.

Training and Education

Resources available for training outpatient physicians in psychological, behavioral, and medical comorbidities among patients with ASD have improved over the past several years.[5–8] However, educational initiatives focused on inpatient ASD management have been limited, despite evidence that patients with ASD have difficulties with communication, procedures, and new environmental stimuli, all common aspects of hospitalization.[4,9,10]

Pediatric residents and program directors alike acknowledge a lack of skills and knowledge among residents in the management of behavioral health concerns.[11,12] Despite ongoing efforts to improve behavioral and psychiatric training, pediatricians generally do not consider themselves to be competent in the management of mental health complaints. In a 2014 survey, 65% of pediatricians reported a lack of training in, and >50% did not feel comfortable managing, behavioral conditions.[11] Completion of a child psychiatry rotation increased reported comfort of recent pediatric residency graduates with caring for patients with behavioral complaints[13,14]; however, child psychiatry is not an Accreditation Council for Graduate Medical Education (ACGME) requirement and is typically only offered as an elective. Whereas the ACGME-required developmental-behavioral pediatrics rotation offers exposure to patients with ASD and similar diagnoses, this rotation is primarily in the outpatient setting and short in duration.

Similar limitations exist in pediatric fellowship training. With the recent recognition of pediatric hospital medicine as a subspecialty by the American Board of Pediatrics, and on-going efforts to create ACGME standards for training, opportunity exists for emphasizing inpatient care of patients with autism and other behavioral and mental health care needs.[3,11] Although some hospitals have begun addressing the need for training (Boston Medical Center's Autism Friendly Initiative,[15] Indiana University's DVD guide for ED physicians on "Assessing and Treating Individuals with ASD"[16]), the continually increasing number of patients admitted with comorbid psychiatric and/or behavioral diagnoses necessitates improved training standardization to improve care for this specific group of patients who can have worsening symptoms in the hospital setting.

Multidisciplinary Care

The American Academy of Pediatrics recommends a multidisciplinary approach to early identification and intervention in patients with ASD to improve long-term developmental outcomes.[5] Recently, this multidisciplinary approach has been applied to inpatient settings through development of autism-focused care plans (ACPs). One such ACP developed at Massachusetts General Hospital is a parent-completed questionnaire encompassing 3 domains (communication, social and pragmatic concerns, and safety) that is uploaded into electronic medical records. Broder-Fingert et al[3] reviewed their experience and found that ACP use led to improved parental perception of hospital experience and greater staff attention to their child's ASD-specific needs. Although encouraging, this ACP specifically did not address psychiatric concerns, which would limit its use for patients like ours.

Patients with ASD have high rates of other comorbid psychiatric conditions (including depression, attention-deficit/hyperactivity disorder, obsessive-compulsive disorder, and psychosis), which are exacerbated by acute events such as hospitalization.[4,10] Access to an inpatient psychiatric consultative service leads to improved patient outcomes, shorter LOS with resultant decreased hospital costs, and family satisfaction.[17,18] However, this service is not widely available, underscoring the importance of inpatient provider communication with primary care physicians, outpatient mental health care providers, and parents and caretakers. Partnering with a provider that has a long-standing relationship with a child can provide great insight into what has previously been effective, common triggers; how to best manage behavioral and psychiatric complaints; and what the patient's baseline level of functioning is so as to better adapt the hospital experience to that baseline. This information can aid in the development of a more effective, comprehensive, and patient-centered care plan.[3,10]

Status of Inpatient Psychiatric Units

Practicing hospitalists are all too familiar with the patient who is medically cleared for discharge but remains admitted for days or even weeks while awaiting psychiatric hospital placement. Treatment in an inpatient psychiatric unit with staff trained specifically to care for patients with ASD

improves LOS and long-term follow-up.[19–22] Unfortunately, the number of pediatric psychiatry providers is inadequate to meet current needs.[11] In California in 2015, there were only 11 providers of inpatient child psychiatric services and 29 adolescent providers.[22] These statistics raise the following questions: what efforts are being made to provide more access to inpatient pediatric psychiatric facilities? If such facilities are not available, how can we ensure pediatric hospitals are best serving the needs of patients with psychiatric or behavioral comorbidities?

Multiple barriers exist to tackling this complex situation (medical, political, financial), and focusing on 1 solution alone is insufficient; it is important to take a multifaceted approach. Improved pediatric resident, fellow, and faculty training in psychiatric and neurodevelopmental conditions will raise awareness about current challenges in securing appropriate treatment. Partnering with parents, families, and outpatient care providers to understand and incorporate their valuable perspective into our medical management is necessary. However, education and community efforts need to be combined with advocacy at institutional, organizational, and national levels to improve access to appropriate, high-quality inpatient care.

CONCLUSIONS

High-value inpatient care for children with ASD or other neurodevelopmental or psychiatric disorders should be enhanced in ways already embraced by outpatient facilities, such as standardized education for medical providers, development of multidisciplinary care pathways, and advocacy for improved inpatient mental behavioral health resources at the local and national levels.

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