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Original Research Report

National Survey on Pediatric Acute Agitation and Behavioral Escalation in Academic Inpatient Pediatric Care Settings

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Background: *Pediatric acute agitation and behavioral escalation (PAABE) is common and disruptive to pediatric inpatient health care. There is a paucity of literature on PAABE in noncritical care inpatient pediatric care settings with little consensus on its evaluation and management.* **Methods:** *In January 2016, a 34-question survey was e-mailed to pediatric hospitalists and consultation-liaison psychiatrists through their respective professional listservs. Excluded responses included incomplete surveys, and surveys from providers in community care settings. The survey consisted of multiple-choice questions, rating scales, and free-text responses relating to the identification, education, and evaluation and management of PAABE at the respondent's respective hospital.* **Results:** *Responses were obtained from 38 North American academic children's hospitals. Of the respondents, 69.3% were pediatric hospitalists and 30.7% were pediatric psychiatry consultants. Most respondents practice in urban areas (84.2%), and in hospitals with ≥100 beds (89.4%). Overall, 84.2% of the respondents encountered PAABE at least once a month and as frequently as every week. Most respondents (70.0%) rated PAABE as an 8 or higher on a 10-point Likert scale. Despite being highly important and common, 53.9% of respondents do not screen for risk factors for PAABE, 63.6% reported no formal process to facilitate caregiver involvement in managing PAABE, and 59.7% indicated no physician training in PAABE evaluation and management.* **Conclusion:** *Many pediatric hospitals identify PAABE as a great concern, yet there is little training, screening, or standardization of care in PAABE. There is a need to consolidate existing knowledge regarding PAABE, while developing enhanced collaboration, training, and standardized practice in inpatient PAABE.*

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Key words: agitation, aggression, pediatric, inpatient, consultation psychiatry, hospital medicine.

INTRODUCTION

Pediatric acute agitation and behavioral escalation (PAABE) is a prevalent and highly problematic issue in acute care settings.[1–6] Acute agitation and behavioral escalation are descriptive terms for a series of symptoms and behaviors that present because of a variety of underlying etiologies[3] (Figure 1). These etiologies may include delirium, other organic causes,

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FIGURE 1. Key Definitions.

Agitation: State of increased cognitive, emotional and motoric activity, associated with a heightened autonomic response that is related to antecedent stressors and intrinsic patient-related factors[3].

Behavioral escalation: Display of externalizing behaviors that are progressive and disruptive to care

Aggression: Any verbal or physical behavior that places oneself or others at harm, or may result in damage to property[3]

substance-related causes, psychiatric conditions, developmental delay, sensory disturbance, or often a multifactorial etiology.[1,3] The inpatient setting is an environment that places patients at increased risk of PAABE due to the increased stimulation, unfamiliar environment, and increased illness severity. Increased illness severity also places the patient at higher risk of developing delirium, which may result in agitation, particularly in the setting of hyperactive delirium. Agitation and behavioral escalation are precursors to aggression.[3] The identification and effective management of PAABE can stem the progression of a patient's behavioral response from reaching aggressive and destructive behavior.

Pediatric hospitalists are often on the frontlines of managing the care of inpatient PAABE.[6–8] Poor prevention, unrecognized risk factors, delayed assessment, inconsistencies in care, and suboptimal management can result in preventable morbidity, delays in care, invasive intervention, patient and familial distress, and care provider dissatisfaction.[1–4,6,9,10] There is minimal literature in pediatric inpatient medical settings on PAABE. The literature that exists is in intensive care settings with a focus on specific contexts, such as delirium and sedation. This is partly because of difficulties in reliably defining and assessing PAABE across settings and disciplines, as well as maintaining a highly homogenous group of study participants longitudinally.[10,11] Previous studies have shown inconsistency in practice, missed opportunities for early identification and prevention, reduced collaboration within the care team and with families, and overuse of interventions including polypharmacy, oversedation, and restraint.[2,3,9]

The purpose of this study was to obtain information from pediatric hospitalists and consultation-liaison (C-L) psychiatrists in academic pediatric inpatient care settings as to the current evaluation and management of PAABE. We hypothesize that there is an inadequate training and vast inconsistency in current practice caring for hospitalized children with PAABE, confirming our previous understanding in other care settings. This survey aimed to characterize how practice and training experience in PAABE may be similar or different based on specialty of practice, namely pediatric hospital medicine or pediatric (C-L) psychiatry. We also sought to determine if there were existing screening, communication, and evaluation and management strategies that were formalized and used in pediatric inpatient settings.

METHODS

Survey Development

The study received institutional review board exemption through the University of Michigan. This survey was designed to obtain information from 2 population groups, namely, pediatric hospitalists and pediatric (C-L) psychiatrists to inform ongoing quality improvement efforts in PAABE. The goal of the survey was to obtain a baseline assessment of strategies and resources used at other academic hospitals to inform development of future guidelines. As there is no existing validated survey instrument for this topic, the C.S. Mott Children's Hospital PAABE Workgroup developed the survey. Survey validation was then completed using local subject matter experts (with representatives in Pediatric Hospital Medicine, pediatric C-L psychiatry, critical care medicine, and nursing) to test for face and content validity. It was piloted within the group for the ease of administration. Hospital name was collected to avoid overrepresentation of any single hospital in the survey analysis, and was also used to assess survey reliability.

The survey included demographic information regarding the participant and his or her hospital, standardized definitions of the terms acute agitation and behavioral escalation, 8 "yes/no" questions regarding hospital resources and educational efforts with follow up free-text responses to those answering "yes," 2 questions related to frequency of events, and 2 open-ended questions allowing respondents to describe additional resources and efforts to address these issues.