Conclusions: Continuous QI around a variety of measures can identify disparities and targets for sustained anti-racist improvements in emergency department care. This study will guide further intervention and education around inequities in care in our department and has prompted further consideration of, when restraints are deemed necessary, preferentially using less invasive measures like the restraint chair over 4-point restraints. Although decision-making around chemical and physical restraints for mental health emergencies is complex and difficult to study, EDs should carefully examine their use through continuous QI in order to optimize patient-centered outcomes.

6 Emergency Department Use of a Restraint Chair is Associated with Shorter Restraint Periods and Less Medication Use than the Use of 4-point Restraints

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Background: Physical and chemical restraints are commonly used in the emergency department, but ongoing quality improvement is needed to improve patient experience by minimizing their use and ensuring equity in their administration. Prior research in inpatient settings has suggested that restraint periods are shorter, fewer adjuvant medications are used, and staff perceptions of patient experience are improved when a restraint chair is used as compared to 4-point restraints.

Methods: We prospectively collected data for all patients who had a behavioral code called in the emergency department of our Level-1 Trauma Center over a 3-month period. We recorded their demographics, visit characteristics, and certain aspects of restraint use including type of restraint, length of restraints, and medication use. In addition to tracking these metrics, employee perceptions of the psychiatric mental health emergencies were polled and evaluated.

Results: Out of 175 behavioral codes, 35.4% of patients were not placed in restraints, 34.9% were placed in the restraint chair, and 29.7% were placed in 4-point restraints. Average time in restraints was 56.1 minutes for those in the restraint chair (IQR 30-62.5 minutes) and 91.6 minutes for those in 4-point restraints (IQR 54.5-115.5 minutes). Medications were given to 70.8% of those who were not restrained, 82.0% of those placed in the restraint chair, 90.4% of those placed in 4-point restraints. Repeat medications were given to 32.3% of those who were not restrained, 21.3% of those in the chair, and 30.8% of those in 4-point restraints. In a follow up questionnaire of all emergency department staff of varying job classifications involved in behavioral codes, 89.6% reported that the restraint chair is a better patient experience than use of 4-point restraints.

Conclusions: This quality-improvement project at our Level-1 Trauma Center suggests that the use of a restraint chair during behavioral codes is associated with shorter times in restraints for patients than when standard 4-point restraints are used. Patients who are placed in the restraint chair also required less initial and repeated medication than those who are placed in 4-point restraints. In addition, the impression of a majority of emergency department staff involved in behavioral codes is that that patient experience is better in with use of the restraint chair than 4-point restraints. This project did not account for confounders of patient presentation that may influence care providers, decisions to use restraints or medications in behavioral codes or to call them in the first place.

7 Virtual Schooling and Pediatric Mental Health During the COVID-19 Pandemic

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Introduction: The first six months of the COVID-19 pandemic saw a nearly 50% increase in pediatric mental health emergencies. Specific factors contributing to this rise remain poorly characterized. One frequently cited contributor is pandemic-related interruptions of in-person schooling. Early studies indicate that students have experienced significantly greater psychological distress during such disruptions. We set out to investigate what correlation, if any, exists between school modality (ranging from exclusively virtual to exclusively in-person) and pediatric mental health status.

Methods: This is a retrospective, descriptive study combining patient chart review and parental telephone survey, exploring the prevalence and severity of mental illness among inpatients at a single urban, academic, midwestern tertiary care center. The study population included all patients ages 6-18 admitted to the study site during the 2015-19 and 2020-21 school years who received Psychiatry and/or Psychology consults and/or were admitted to the inpatient psychiatry unit. Parents/guardians of participants from 2020-21 were surveyed regarding their child, educational experiences. We describe and compare participants between school years prior to and during the pandemic using descriptive demographic data and clinical data highlighting monthly admission rates and proxies for illness severity. We then assess for any correlation between these measures and recent virtual schooling.

Results: Total mental health-related admissions rose from an average of 1070 during pre-pandemic school years to 1111 in 2020-21. Patients admitted in 2020-21 were more likely to be female, non-white, and from ZIP codes with higher median income. Primary diagnosis was more likely to be a mood or eating disorder. Patients were less likely to present primarily for suicidal ideation or self-harm. Proxies of illness severity, including utilization of PRN antipsychotics/benzodiazepines and readmission rates, rose in 2020-21. 255 of 800 (31.9%)

families responded to the telephone survey. Respondents were more likely to have a child who was female and slightly younger compared to non-respondents. 98% of respondents reported some virtual schooling for their child, with 77% reporting virtual schooling for the majority of the three months prior to their child, first hospital admission. 61% indicated their child was exclusively in virtual school. No significant relationships were observed between virtual schooling and any outcome measures relating to mental health.

Conclusions: Pediatric mental health emergencies and hospitalizations have grown and evolved since the start of the COVID-19 pandemic. This study characterizes some of the changes in patient demographics and experience with virtual schooling prior to and following the pandemic. Our results do not support any correlation between virtual schooling and mental illness requiring emergent care or hospitalization. However, this study has many significant limitations. Respondents were not representative of all admitted patients, and survey data were gathered for only one-third of families whose children were admitted at one site. Very few respondents remained in school in person throughout the pandemic, complicating efforts to make meaningful comparisons. Future work should attempt to capture a broader subject pool and obtain prospective data regarding the effects of school modality on mental health.

8 The Utility of the Columbia-Suicide Severity Rating Scale in Determining a Patient, Imminent Risk for Suicide in the Emergency Department

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Background: In response to a 2019 Joint Commission report highlighting new suicide screening requirements, many hospitals have initiated universal screens for suicidal ideation for all patients. A common algorithm is to screen patients upon their entrance to a hospital with a tool such as the Columbia-Suicide Severity Rating Scale (C-SSRS). When a patient enters our institution, Emergency Department (ED), they are screened by a Registered Nurse (RN), who is either a psychiatric RN or a non-psychiatric ED RN, with the C-SSRS to assess their level of imminent risk for suicide. Patients scoring a 4 or 5 on the C-SSRS are considered high-risk, and one-to-one constant visual observation via a safety assistant is automatically assigned. All of these patients must then be formally assessed by the psychiatric consultation team, who then recommend whether to continue or discontinue the safety assistant. Existing literature on the C-SSRS measures either chronic risk over time (six months) or evaluates patients already admitted to an inpatient psychiatric unit, thereby selecting for an already known high-risk population. There is limited data on the validity of the C-SSRS in determining a patient, imminent risk for suicide upon presentation to the ED. Assignments of safety assistants may impose a psychological toll upon patients due to the resulting infringement upon the patient, independence and privacy, and this toll may sometimes result in further acute psychiatric decompensation. In addition, safety assistants are a limited resource, and their overutilization may present a financial and personnel concern for hospitals. It is thus pertinent for hospitals to assign safety assistants judiciously.

Objective: To evaluate the utility of the C-SSRS in assessing a patient, imminent risk for suicide compared to a psychiatrist, evaluation, and to determine whether the C-SSRS more accurately assesses imminent risk for suicide when administered by a psychiatric RN as opposed to a non-psychiatric ED RN.

Method: We examined patient encounters for which a safety assistant was ordered for suicidality based on a C-SSRS score of 4 or 5 (n = 164). For each encounter, we recorded the psychiatry team, recommendation for continuation or discontinuation of the safety assistant, title of the RN who administered the C-SSRS, and total duration of the safety assistant assignment. Data was analyzed via a multivariate logistic regression analysis.

Results: The psychiatry team aligned with the C-SSRS in assessing a patient as high-risk for imminent suicide in the ED 22.6% of the time. Administration of the C-SSRS by a psychiatric RN was not associated with increased C-SSRS accuracy in capturing high-risk patients compared to administration by a non-psychiatric ED RN. The average duration of unnecessary safety assistant assignments was 6.8 hours.

Conclusion: The data supports that the C-SSRS is of limited utility when determining a patient to be of high-risk for imminent suicide in the ED and may result in prolonged care due to unnecessary assignments of safety assistants. We propose that the C-SSRS should not be relied upon as the sole method for assessment of risk for imminent suicide in the ED.

9 Rare Disease Masked Behind Common Presentation: Toxic Leukoencephalopathy Up Close

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Toxic leukoencephalopathy refers to a structural alteration of the white matter, generally affecting myelinated structures. It is caused by environmental toxins, substance use, or chemotherapeutic agents. The clinical presentation is extremely variable, ranging from minor cognitive impairment to severe neurologic dysfunction, and is often mistaken for primary psychiatric illness. A 51-year-old man presented involuntarily to the ED for bizarre behavior and disordered mentation. His initial cognitive evaluation showed orientation to person but neither place nor time. He was unable to state how he arrived