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Acute Agitation Management in Patients with Schizophrenia or Bipolar Disorder in Emergency Departments in the United States - A Retrospective Chart Review

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innovative care model designed to treat patients with psychiatric emergencies in an acute hospital setting while prioritizing rapid stabilization of the acute crisis in a calm, dignified, and safe environment. They have been found to reduce the cost of care, patient boarding, and psychiatric admissions. Another potential quality marker to evaluate the impact of EmPATH units and improve processes for implementing EmPATH care in Emergency Department (ED) settings is the rate of patient return to the ED, known as ED recidivism. This study analyzes the difference in 14-day ED recidivism rates for ED patients with an EmPATH Sensitive Primary Diagnosis (ESPD) ICD 10 code who were dispositioned after standard care in the ED versus those who were dispositioned after treatment in the EmPATH unit. We hypothesize that patients admitted to the EmPATH unit will have a lower recidivism rate than patients dispositioned following ED management.

**Methods:** For this project, an ESPD includes Adjustment Disorders, Anxiety Disorders, Attention Deficit/Conduct Disorders, Impulse Control Disorders, Mood [Affective] Disorders, Nervousness, Personality Disorders, Schizophrenia and Other Psychosis, Suicide, and Intentional Self-Injury. This study retrospectively analyzes 14-day recidivism rates for adult patients in two relevant ED populations: all ED patients with an ESPD admitted to the EmPATH unit and those not admitted to the EmPATH unit. The 4-bed EmPATH unit of the single study site is adjacent to an adult ED of an urban tertiary care center with an annual patient volume of 105,000 visits. Analytics were processed from data securely stored within d2i, a third-party database that uses the business objects platform. Statistical analysis of recidivism rates was performed using a two-proportion Z-test. Visits primarily related to alcohol use disorder were excluded. 13 months of data were analyzed from July 2021 through July 2022.

**Results:** During this period, 622 patients with an ESPD were dispositioned from the EmPATH unit, and 2447 patients with an ESPD were dispositioned from the ED directly. 100 patients were dispositioned from the EmPATH unit and 526 were dispositioned following emergency department management and returned to the emergency department within 14 days. Patients dispositioned from the EmPATH unit had a 14-day ED recidivism rate of 16.08% and ED patients with an ESPD not admitted to the EmPATH unit had a 14-day ED recidivism rate of 21.50%, 95% CIs [13.19%, 18.96%] and [19.87%, 23.12%]. Patients dispositioned from the EmPATH unit during this period had a statistically significantly lower 14-day ED recidivism rate than patients dispositioned following emergency department management,  $z = 2.94$ ,  $p = 0.003$ .

**Conclusion:** ED patients admitted to the EmPATH unit had lower ED recidivism rates than those not admitted to the EmPATH unit. These findings suggest an additional metric that may be useful in quality improvement processes related to management of EmPATH units. It also suggests an additional benefit of implementation of EmPATH units with respect to cost

and patient-centered outcomes. However, additional research in this area is needed.

## 12 Acute Agitation Management in Patients with Schizophrenia or Bipolar Disorder in Emergency Departments in the United States - A Retrospective Chart Review

*Mae Kwong, Sonja Hokett, Marc Martel, Rebecca C. Rossom, Gary Vilke, Michael P. Wilson*

**Introduction:** Access to behavioral health care can be limited, leaving patients with mental illness few options. Oftentimes, patients must seek care at medical emergency departments (ED) which may not be ideally designed to manage the needs of patients with mental illness. Over half of psychiatric ED visits are associated with agitation and nearly 50% of patients need medication. Therefore, appropriate management of uncontrolled agitation is important to avoid further escalation. When de-escalation techniques are unsuccessful, medication is typically used to acutely manage agitation. The objective of this study was to understand how patients with schizophrenia or bipolar disorder with agitation are managed in the ED setting.

**Methods:** Using best practices for retrospective reviews, adult patients (aged 18-75) with schizophrenia and related disorders or bipolar disorders who presented to the ED with acute agitation were identified using EPIC electronic health records across four US hospitals. Qualifying records were identified for visits between January 2019 and December 2020, and segregated into two cohorts: individuals with schizophrenia, individuals with bipolar disorder. Data abstracted included medications used to acutely manage agitation, including route of administration; time to certain care points from admission through discharge disposition; psychiatric consultation if requested; and physical restraint use. Descriptive statistics were utilized.

**Results:** Data on 202 patients were extracted, including 121 (60%) individuals with schizophrenia and 81 (40%) individuals with bipolar disorder. The median patient age was 38 years, and most were male (58%). Diagnosis at the time of presentation to the ED included schizophrenia and related disorders (38%), bipolar disorder (27%), other diagnosis (17%), and 18% had a missing diagnosis. The accompanying conditions were agitation (54%), agitation including intoxication (19%), or other (13%). For both cohorts, the most commonly administered medications were lorazepam intramuscular (IM) injection (20%), haloperidol lactate IM injection (17%), olanzapine IM injection (17%), lorazepam oral tablet (16%), and olanzapine oral disintegrating tablet (15%). The differences in elapsed times from presentation to ED to certain care points between the schizophrenia and the bipolar disorder cohort were not clinically meaningful. Overall, the median time that elapsed between presentation

of the patient to the ED and first round of medication(s) administered was 53 minutes, request for psychiatry consultation 102 minutes, first evaluation by the consulting psychiatrist or psychiatric resident 172 minutes, and discharge of the patient 427 minutes with 60% of patients discharged home. Physical restraints were used for 55 patients (27%) and security personnel were involved in nearly 40% of cases.

**Conclusion:** These results can improve understanding of the management of acute agitation for patients with schizophrenia or bipolar disorder. With the increase in boarding for patients with psychiatric diagnoses in the ED, appropriate management and throughput of patients with agitation and schizophrenia or bipolar disorder are important. Additional strategies to manage acute agitation for patients with schizophrenia or bipolar disorder may reduce the need for IM injections or physical restraints and could expedite care in the ED setting. Bioxcel Therapeutics sponsored the study. No Bioxcel product was used during the data capture as product was not FDA approved.

## 13 Effect of Alcohol Intoxication in the Emergency Department on Suicide Mortality

*Kevin Skoblenick, Esther Yang, Michael P Wilson, Brian Rowe*

**Introduction:** Suicide represents a significant worldwide disease burden disproportionately affecting younger patients in their prime working years. Mortality by suicide remains within the five leading causes of death up to the age of 60. Compounding this, alcohol use disorder (AUD) is known to be a risk factor for death by suicide and has been on the rise over the last 20 years, particularly during the COVID-19 pandemic. The emergency department (ED) is often the first point of health care contact for those patients that have suicidal thoughts or behaviours and understanding their acute risk of death by suicide when presenting intoxicated with alcohol remains a challenge for ED physicians. While the chronic disease of AUD elevates their lifetime risk for death by suicide, it has not been established how a presentation for suicidality accompanied by acute alcohol intoxication affects this risk.

**Methods:** This was a retrospective cohort study using population-based linked health administrative data for adult patients aged 18 or above who presented to Alberta (ED) between 2011 and 2021 for suicidal attempt or self-harm behavior. Patients who were acutely intoxicated with alcohol were identified and analyses compared patients with and without alcohol intoxication. The primary outcome was six-month death by suicide. Categorical variables were summarized using proportions, whereas continuous variables were summarized using means and standard deviations (SD) or medians and interquartile ranges (IQR), as appropriate. Competing risk analysis was performed to explore the cumulative incidence of death by suicide within 180 days after

their index ED visit and examine the association between death by suicide and alcohol intoxication.

**Results:** Patients presenting to the ED for suicide attempt or self-harm behaviour were intoxicated with alcohol in 30% of cases as determined by diagnostic coding and blood alcohol measurements. Intoxicated patients were more likely to be placed under involuntary mental health hold (26% vs 16%) and had on average a longer length of stay in the ED (411 min vs 277 min) but were less frequently admitted (10.8% vs 15.4%). As a departure from previous literature, those intoxicated with alcohol were more likely to be consulted to psychiatry (15.8% vs 12.6%). Mortality due to suicide in the 6 months following the patient, index ED visit were similar between the intoxicated and non-intoxicated groups (0.3% vs 0.3%) however there was a significant increase in all-cause mortality at 6 months in the non-intoxicated group (1.5% vs 2.1%).

**Discussion:** This study examined the patient and ED treatment characteristics of patients presenting to the ED with suicide attempt or self-harm behaviour. It found that the 6-month risk of death by suicide was no different in those who presented with acute alcohol intoxication vs those without. While these results differ from other studies discussing how alcohol use disorder confers a chronically increased risk of death by suicide, they provide new evidence for the emergency department providers to consider when assessing the patient who presents with suicidal behaviours while intoxicated.

## 14 The Effectiveness of Team Approach Physical Restraint (TAPR) in Reducing Patient and Staff injuries: A Retrospective Review

*Jonathan Garcia, Stephanie LaBuz, Maureen Ramos, William David, Hannah Butler, Brigit Hines, Brian Menard, Haley Matejowsky, Daniel Alanis, Donaldson Betts, Brooke Thawley*

Hospitals nationwide have been dealing with an increase in violence to health care workers and one Houston safety hospital is no different. Year to date Harris Health has had over 700+ alerts for crisis intervention/security with some of those interactions leading to staff injuries. The Team Approach to Physical Restraint or TAPR is a role based effective way of using closed loop communication to reduce the likely hood of injury to staff, the patients all while maintaining a safe airway. The goal of this research study is to illustrate how addressing the patient at all of the three levels of disruption up to and including the last stage of imminent threat to self and others can be safely managed with reduced risk to everyone involved. Patient safety is paramount in all interactions but never more so in a situation where all other means of de-escalation have been attempted. In using TAPR and proper body mechanics, both patient safety and protecting the patient's airway at all times are addressed in this study.