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Research Trainee Award Finalists

Clozapine and Risk of Hematologic Malignancies in Veterans with Schizophrenia

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Type: Original Research. **Purpose:** Recent reports have linked clozapine to an increased risk of hematologic malignancies, such as lymphomas, leukemias, and myelomas. A case-control study using Finland's national health registry found that clozapine was associated with an increased odds of hematologic malignancies in a dose-dependent manner compared to other antipsychotics. As this is the only controlled epidemiologic study published to date, we aimed to replicate this methodology using national administrative data from the United States Veterans Health Administration. **Methods:** This case-control study of veterans with schizophrenia matched cases with an incident hematologic malignancy with up to ten controls without hematologic malignancy by gender, age, and time since first schizophrenia diagnosis. Cases and controls were further required to be between 18 to 85 years of age, have no prior history of non-hematologic malignancy, and at least one year of antipsychotic exposure. Clozapine exposure among cases and controls was assessed using three metrics: any exposure, years of exposure, and cumulative defined doses (DDD). Potential confounding variables were adjusted for via conditional multivariable logistic regression. **Results:** A total of 2306 veterans with schizophrenia were identified with an incident diagnosis of hematologic malignancy and matched to 23,043 controls. Veterans were most commonly male (94.4%) and Caucasian (58.6%) with cardiovascular disease being observed in 37.6% and 30.8% in case and control groups, respectively. Any prior history of clozapine exposure was more commonly observed among cases (5.3%) than controls (4.1%) and was significantly different after adjustment using multivariable logistic regression (OR 1.31 [95% CI 1.08-1.60]). Risk was dose-dependent, where cumulative clozapine exposures from 3000-4999 DDD (OR1.78 [95% CI 1.13-2.79]) and $\geq$ 5000 DDD (OR1.81 [95% CI 1.24-2.64]) were significantly associated with malignancy risk, but exposures $<$ 3000 DDD were not. Similarly, clozapine exposure of five or more years was associated with malignancy risk (OR=1.88; 95% CI: 1.43-2.47), but shorter durations were not. **Conclusions and Future Directions:** This study was consistent in finding a dose-dependent increased risk of hematologic malignancy associated with clozapine exposure. These findings suggest patients meeting criteria for long-term clozapine use should be closely monitored for signs or symptoms of hematologic malignancy.

A Retrospective Review of Readmission Rates in Patients Initiated on Long-Acting Injectable Antipsychotics During Psychiatric Hospitalization

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Type: Work in Progress. **Background:** Medication non-adherence occurs in many chronic disorders, particularly schizophrenia and other serious mental illnesses where patients may lack insight and social support. Maintenance treatment is often necessary, but negative perceptions and side effects may result in poor adherence. Nonadherence may lead to disease relapse and progression, rehospitalization, increased medical costs, and increased rate of suicide. It is assumed patients initiating long-acting injectable antipsychotics (LAIA) under court order will have better outcomes post-discharge; however, little information is available about this subgroup. The LAIAs were developed to improve adherence and decrease hospitalization. Our objective is to determine whether the use of an LAIA decreases readmission rates, time to readmission, and length of stay compared to an oral antipsychotic (OAP) alone. **Objectives:** (1) Compare relapse rates within 3, 6, and 12 months of hospital discharge in patients initiated or reinitiated on a LAIA vs OAP alone. (2) Compare the number of days to relapse in patients

initiated or reinitiated on a LAIA vs OAP alone. Sub-analyses will include between-group comparisons of number of days to psychiatric emergency services (PES) or inpatient encounter and court-ordered versus voluntary LAIA initiation and time to relapse. **Methods:** This multi-center, IRB-approved retrospective chart review will include adult patients admitted to an inpatient acute psychiatric unit between January 1, 2019, and August 31, 2021, who received LAIA or OAP and have a diagnosis of schizophrenia, schizoaffective disorder, or bipolar disorder. Chart review will determine if patients were discharged on a LAIA, had court-ordered medications, time to PES visit or hospitalization post-discharge, length of stay when rehospitalized, and access to community services. Power analysis dictated a sample size of 370 patients. The comparator group is patients prescribed OAPs alone. Descriptive statistics and regression models will be performed to determine patient factors associated with LAIA use and relapse. **Results:** Interim analysis of the court ordered LAIA subgroup indicates 50% are rehospitalized within 3 months. Demographics indicate this group is 90% male and 70% Black or African American. **Outcomes:** Data collection and analysis of readmission rates, days to relapse, and demographics of patients on LAIA or OAP will be completed in 3 months.

Innovative Practices Award Finalists

Outreach Visits by Pharmacist Improves Adherence to Long-Acting Injectable Antipsychotics in a Rural Setting

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Type: Innovative Practices. **Background:** Features of schizophrenia, such as poor insight and disorganized thought, impact ability to seek and receive care consistently. These challenges are exacerbated in rural settings where systemic factors including limited resources and transportation add barriers to healthcare access. Long-acting injectable antipsychotics (LAIs) can improve medication adherence and reduce hospitalizations from relapse. Opportunities exist for psychiatric pharmacists to provide individualized care and improved healthcare access in this setting. Of 10 total patients prescribed LAIs in the past year at this facility, only one patient was adherent to medication as defined by administration within 2 weeks of recommended schedule. **Description of Innovative Service:** Pilot service took place in the home visit setting and pharmacist ambulatory care clinics facilitated by the pharmacist outreach team and clinic pharmacists at Whiteriver Indian Hospital. The outreach team is comprised of 2 full-time pharmacists and focuses on services in the community setting, including vaccinations, chronic disease management, health promotion and education. Pharmacists practicing in ambulatory clinics utilize prescriptive authority to manage chronic diseases under collaborative practice agreement. Pharmacists performed weekly reviews of patients with active orders for LAIs, coordinated care with non-adherent patients, and offered follow-up appointments in the Patient Centered Medical Home. For patients unable to be reached or unable to come to clinic appointments, outreach pharmacists provided psychiatric assessment and LAI medication administration if appropriate at home visit setting. **Impact on Patient Care:** The time period reviewed was 90 days before and after start of service. Pharmacist interventions resulted in four patients reestablished with care who were previously lost to follow-up as defined by no contact with facility for longer than 3 months. The percentage of days covered by LAI fills increased in six patients from average 26% to 67% of days covered. Average emergency room visits per patient related to mental health episodes decreased from 1.1 to 0.2 visits. Four patients who did not have metabolic lab monitoring in over one year received lab monitoring as indicated. **Conclusion:** Outreach pharmacists may improve access and bridge gaps in care in patients on LAIs by providing home and community-based services outside of traditional clinic settings.

Training Pharmacy Students to Administer Long-Acting Injectable Medications

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Type: Innovative Practices. **Background/Rationale:** In June of 2022, the State of Maryland released regulations which permitted pharmacists the authorization to administer maintenance injectable medications for the treatment of psychiatric disorders, substance use disorders, infectious diseases, contraception, and vitamins. A board approved-training program must be completed by those who seek to administer these medications. As part of the formal curriculum at the University of Maryland, School of Pharmacy, a training program was created to prepare all student pharmacists to administer maintenance injections. **Description of Innovative Service:** A training program was developed within the Abilities Laboratory course which is designed to learn and practice patient education, dispensing, and communication techniques. Students were required to review medication administration guides, videos, and materials prior to lab. Four stations were created to complete a didactic review of regulations, policies and procedures for administering the injectable medications, a case-study discussion to provide opportunities for practicing education, a preparation station for a hands-on opportunity to practice

preparation and mixing, and an administration station to accurately prepare and inject a gluteal injection. Faculty, residents, and industry medical science liaisons participated in each of the stations. Each student was coached and evaluated on the medication administration process. **Impact on Patient Care/Institution:** During this first offering, 94 students were trained over the course of 4 hours. Given the number of significant barriers to a patient being able to start and continue a medication, pharmacist administration of maintenance injectable medications is essential for those being treated for a chronic illness. The training program, the first in the state, has prepared students to enter the workforce with the necessary skills to administer maintenance injectable medications. Graduates will not require additional training upon graduation and can increase access to these much needed medications immediately upon entering the workforce. **Conclusion:** With the approval of regulations, pharmacists within the State of Maryland are now authorized to administer maintenance injectable medications, increase access to care, extend the public health role of trained pharmacists, and improve interdisciplinary cooperation. Our innovative training program provides every student pharmacist the training required to provide these essential medications to the citizens of Maryland.

Therapeutic Case Report Award Finalists

A Search and Seizure for Relief- the Effective Pharmacological Treatment of Psychogenic Non-Epileptic Seizures (PNES) with Escitalopram

Austin De La Cruz, PharmD, BCPP[1,2]; Leslye Echeverria, PharmD Candidate[1]; Sukaina Makzoumi, PharmD Candidate[1]; Alexis Nguyen, PharmD Candidate[1]

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Type: Therapeutic Case Report. **Background:** Psychogenic nonepileptic seizures (PNES) is a somatoform disorder diagnosis given to patients who experience involuntary seizure-like episodes without any associated findings of electrophysiological epileptic changes. PNES is a poorly understood condition that is often misdiagnosed as epilepsy or as some other type of movement disorder and is frequently mismanaged. **Patient History:** The patient is a 56-year-old African American male first diagnosed with PNES on May 12, 2022, but reports seizure-like episodes dating back 10 to 15 years. Previously, he would only experience 1 to 2 episodes per year, but reports the episodes have become more frequent and aggressive within the past few months. He reports daily seizures, sometimes upwards of seven episodes per day, with occasional episodes that last for approximately 6 hours. His PNES is likely related to an underlying somatoform/dissociative process, depression, and anxiety. He acknowledges several current stressors in his life which have exacerbated his anxiety and depression, including unstable housing, worsening vision, and severe Charles Bonnet Syndrome phenomenon. The patient was previously non-adherent to escitalopram and bupropion. Social history includes cannabis use of 1 to 2 joints every 2 to 3 days, smoking 10 cigarettes per day, and occasional drinking. Past medical history includes hypersomnia, parasomnias (sleep-walking), obstructive sleep apnea, severe primary open-angle glaucoma with progressive vision loss associated with branch retinal vein occlusion, and alternating comitant exotropia. In addition to ongoing psychotherapy, escitalopram was initiated to treat anxiety and depression, while simultaneously improving the patient's PNES symptoms. **Review of Literature:** There is limited data published on the evidence-based management of PNES with even more limited information on pharmacological treatment. A PubMed search revealed no published case reports of PNES treatment with escitalopram. Most evidence available on PNES management involves psychotherapeutic interventions as the mainstay of treatment, with medications targeting the high-risk comorbidities associated with PNES. **Conclusion:** Escitalopram was shown initially to be effective in reducing the frequency and severity of PNES episodes, in addition to improving depression and anxiety. Benefits were noted while the patient was adherent to the medication and psychotherapy. This is the first case report of effectively treating PNES symptoms with escitalopram and concomitant psychotherapy.

Inflammation with Intolerance after Early Clozapine Exposure: A Rationale for Early CRP Monitoring Beyond Myocarditis

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Type: Therapeutic Case Report. **Background:** Clozapine has known pro-inflammatory effects but may manifest in varying degrees of severity. While the clinical presentation of inflammatory adverse drug reactions (ADRs) is heterogenous, underlying inflammation may also result in decreased clozapine metabolism. It is theorized that this acute increase of clozapine concentration further perpetuates the inflammatory process. Reported is a case demonstrating how CRP monitoring may have prevented clozapine-related ADRs. **Patient History:** A 41-year-old, non-smoking, non-obese, White, woman with a history of bipolar disorder, presented to the emergency department with mania. Given a history of multiple past failed medication trials, clozapine 25 mg was initiated and titrated to 200 mg. This resulted in new constipation, sialorrhea, and a feeling of unsteadiness. Following the 12-day hospitalization, she had a follow-up

outpatient appointment with worsening ADRs that impaired daily functioning. A clozapine concentration was found to be 1590 ng/mL and C-reactive protein (CRP) 46.1 mg/L. Clozapine would ultimately be reduced to 100 mg with a corresponding concentration of 336 ng/mL, reduction of ADRs and CRP 19.5 mg/L suggestive of resolving inflammation. Shortly after these events, the patient transferred care outside of the health system and would be maintained on a dose of just 25 mg daily. **Review of Literature:** While the exact mechanism is unknown, clozapine has direct impact on cytokine production and inflammatory response. Cytokines may increase within the first week of clozapine exposure, persisting until at least week six. Clozapine-associated fever may correlate with early elevations of interleukin-6 and tumor necrosis factor-alpha levels. Other inflammatory ADRs also commonly occur early after initial exposure. Examples include isolated fever, myocarditis, hepatitis, pancreatitis, and nephritis. Pathologic CRP is often reported with these inflammatory ADRs and has been shown to correlate with higher clozapine concentrations. Thus, CRP may represent a clinically useful test to detect and prevent clozapine-related inflammation and increasing concentrations that may contribute to ADRs, intolerance, early discontinuation, or mortality. Baseline and weekly CRP for the initial weeks after clozapine initiation has been recommended by a recent international guideline. **Conclusion:** Early CRP monitoring may help detect early inflammation after clozapine initiation and help improve tolerability and safety.

Original Research Award Finalists

Is a Partial Initiation of Paliperidone Palmitate Effective at Reducing Emergency Psychiatric Encounters?

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Type: Original Research. **Purpose:** Risperidone is frequently utilized for acute mental health stabilization at a county psychiatric hospital (CPH). Due to the high rates of medication nonadherence and barriers to outpatient follow-up, patients are regularly transitioned from oral risperidone to the long-acting injectable antipsychotic (LAIA) paliperidone palmitate (PP) prior to discharge. The PP initiation requires 2 doses to achieve lasting therapeutic serum concentrations; however, patients frequently discharge prior to the second PP dose. This study evaluated if a partial versus full initiation of PP reduced emergency psychiatric encounters (EPEs) post-discharge relative to an oral risperidone comparator. **Methods:** This single-center, retrospective chart review identified all patient encounters between January 1, 2022 and November 30, 2022 in which PP was initiated or oral risperidone was prescribed upon discharge. Patient demographics and diagnoses, number of PP administrations, length of hospital stay (LoS), and EPEs post-discharge were collected via county-wide electronic health records. Encounters where oral risperidone was prescribed at discharge were randomly selected 1:1 for each PP initiation. Encounters were excluded if risperidone was prescribed to a patient receiving a concomitant LAIA or if the discharge disposition was to a non-community setting. The primary outcome compared EPEs documented 30 days post-discharge between encounters where patients received partial initiation of PP (1-dose), full initiation of PP (2-dose), or oral risperidone prescription at discharge (PO-discharge). **Results:** A total of 656 encounters were included (328 PP initiations [1-dose: n = 227; 2-dose: n = 101], PO-discharges n = 328). Baseline characteristics were similar between groups except median LoS which was longer in the 2-dose group compared to the 1-dose and PO-discharge groups (11.9 vs 3.0 vs 1.8 days, respectively). There was only a significant reduction in 30-day EPEs in the 2-dose group (29.7%) compared to the 1-dose (41.9%; *P=.037*) and PO-discharge (41.8%; *P=.03*) groups. **Conclusions:** There was no difference in 30-day EPEs between patients who received a partial PP initiation versus an oral risperidone prescription at discharge. Conversely, a full initiation of PP was associated with significant reduction in 30-day EPEs relative to the other groups. These results highlight the importance of providing a full PP initiation prior to discharge at a CPH.

Words Matter: Analysis of the Language Used When Documenting in the Medical Records of Mental Health Patients

Monica Zolezzi, PhD[1]; Oraib Abdallah, PharmD[2]; Turfa Alhathal, PharmD[3]; Yassin Eltorki, MSc Pharm[2]; Shahd Elamin, PharmD[1]; Esraa Maklad, PharmD[1]

[1] College of Pharmacy, QU Health, Qatar University, Doha, Qatar; [2] Mental Health Services, Hamad Medical Corporation, Doha, Qatar; [3] Hamad General Hospital, Hamad Medical Corporation, Doha, Qatar

Type: Original Research. **Background:** The way in which healthcare providers utilize language to document patient care is important. The use of inappropriate terminology when referring to people with mental health conditions can adversely impact the quality of care that they receive, potentially transmit bias, and contribute to the existing stigma surrounding mental health practice. Identifying this biased language is necessary so that it is appropriately addressed when training health care providers. **Objectives:** To identify, describe and compare the patterns of language used by different mental health care providers when documenting care on their patients' medical records. **Methods:** This study consisted of a retrospective review of the documentation notes written by different healthcare

providers. The notes of patients who received mental health services from October 2021 to December 2021 through admission, outpatient clinics, and home visits were included. Language was classified as "Inappropriate (negative) or potentially stigmatizing" and "Appropriate (positive) or conducive of recovery". The content analysis framework was based on the College of Psychiatric and Neurologic Pharmacists (CPNP) Communication Style Guide. Notes were analyzed and classified by two investigators independently, and peer reviewed by a third. Discrepancies were resolved through consensus. Data was entered into Microsoft Excel and characterized by patient demographics, healthcare professional information and type of encounter. **Results:** A total of 300 notes were analyzed, the majority were written by physicians and nurses (37% and 23% of the notes, respectively). The majority of notes were related to patients ranging from 24 to 34 years of age, diagnosed with schizophrenia, bipolar disorder, or depression. The majority of notes (63%) included potentially stigmatizing language. Under this category, disability-first and inappropriate medication-related language prevailed, identified in 33% and 31% of the notes, respectively. A similar number of notes (67%) also employed positive or recovery language. Under this category, using personalized descriptors was the most frequent, identified in 44% of the notes. **Conclusions:** Although a similar frequency on the use of positive and negative language were identified, potentially stigmatizing language was present in a high proportion of the documentation notes, which indicates a pressing need to raise awareness on the use appropriate terminology when training health care providers.

AAPPF Award Finalists

Evaluating the Impact of Photovoice on Self-Stigma Levels Among Individuals with Substance Use Concerns

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North Dakota State University, Fargo, ND

Type: Work in Progress. **Background:** Photovoice is a research methodology where participants capture and reflect on images related to their lived experiences. The goal of photovoice is to promote social change by giving participants voice through photography thereby increasing awareness. Photovoice has not been studied as an intervention for self-stigma among those with substance use concerns. Self-stigma occurs when individuals internalize negative attitudes and shame. **Objectives:** (1) Assess baseline levels of self-stigma among individuals with substance use concerns. (2) Determine whether use of photovoice quantitatively decreases self-stigma levels in this population. (3) Highlight participants' experiences with substance use via addition of their photos and reflections to the existing stigma-reduction web platform (SNAP the Stigma). **Methods:** This IRB-approved prospective mixed-methods project will include participants who self-identify as having concerns with substance use. Participants will take a pre-survey utilizing the Substance Abuse Self-Stigma Scale (SASSS) to determine baseline self-stigma levels. Next, they will post a minimum of 3 to 5 captioned photos to the SNAP the Stigma website relating to their substance use. This will be followed by a post-survey utilizing the same SASSS scale. An in-person focus group will be conducted to provide further context to the quantitative data. Transcripts, along with the photographs' reflections, will be qualitatively analyzed using line-by-line coding to establish themes. **Originality of Project:** While public stigma towards individuals with mental illness is well documented, less is known about self-stigma and its potential interventions. Some literature exists exploring the prevalence and causes of self-stigma among those with mood or psychiatric disorders, but few studies have focused on self-stigma among those with substance use concerns. While literature exists examining the role of photovoice as an intervention for public stigma, less is known about photovoice's impact on self-stigma levels. Previous research has demonstrated that the SNAP website decreases public stigma, but none has examined how the site affects self-stigma. **Significance of Project:** Self-stigma is a barrier to healthcare seeking behavior among those with substance use concerns. Higher self-stigma has been associated with reduced healthcare service utilization and poorer health outcomes. Research is needed to explore interventions to reduce self-stigma in this vulnerable patient population.

Preliminary Evaluation of Psychiatric Pharmacist Services in the Outpatient Setting

Margaret Agosta, PharmD[1]; Casey Tiefenthaler, PharmD, BCPS[1]; Jamie Kneebusch, PharmD, BCPS, BCPP[2]; Kelly C. Lee, PharmD, MAS, APh, BCPP, FCCP[2]

[1] UC San Diego Health, San Diego, CA; [2] UC San Diego Skaggs School of Pharmacy and Pharmaceutical Sciences, San Diego, CA

Type: Original Research. **Background:** Outpatient psychiatric pharmacists serve as important members of the psychiatric healthcare team, providing chronic medication therapy management services including clinical evaluation, medication initiation and adjustment, medication monitoring, patient education and referral to auxiliary services, when necessary. Despite the established training and role of psychiatric pharmacists in the outpatient setting, there is lack of measurable data that show the effectiveness of psychiatric pharmacist interventions. The Best Practices

Model for Outpatient Psychiatric Pharmacy identifies measurement-based care as an ideal attribute. The present study aimed to evaluate the impact of an outpatient psychiatric pharmacist within a collaborative practice at an academic health system using measurement-based outcomes. **Methods:** A patient list was generated from the clinic with the psychiatric pharmacist as the provider from January 1, 2021 through December 31, 2022. Patients with a minimum of three encounters with the psychiatric pharmacist, a diagnosis of mood or anxiety-related disorder, and an active prescription for an antidepressant medication were included. Patients diagnosed with personality or psychotic disorders were excluded. The primary outcome was the mean reduction in Patient Health Questionnaire (PHQ)-9 or Generalized Anxiety Disorder (GAD)-7 scores between the first encounter and third encounter with the psychiatric pharmacist. Secondary outcomes included achievement of remission (PHQ-9 or GAD-7 score $\leq$ 5), length of remission sustained, number of mental health emergency room or hospital visits, and number of patients with mental health referrals made during the study period. Descriptive statistics, χ^2 and *t*-tests were used for demographics and study outcomes. **Results:** Of the 40 patients with a psychiatric pharmacist encounter during the study time frame, 19 patients (7 males, 12 females) met inclusion criteria. Average age was 42.79 years; 84.2% were White and 89.5% were non-Hispanic. The mean reduction in PHQ-9 and GAD-7 scores were 5$\pm$4.41 and 4.25$\pm$4.31, respectively. Remission was achieved in 42% and 63% of included patients based upon the PHQ-9 and GAD-7 scores, respectively. **Conclusions:** The study suggests that measurement-based outcomes can be used to demonstrate effectiveness of outpatient psychiatric pharmacists in patients suffering from mood and anxiety-related disorders. Future studies should incorporate measurement-based outcomes in tracking psychiatric pharmacist interventions.

Original Research Abstracts

A Cross-Sectional Assessment of Perinatal Mental Health of Birthing People

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Type: Original Research. **Background:** Perinatal mood and anxiety disorders can often go undiagnosed and untreated. While some studies have investigated risk factors, symptoms, and treatment of Postpartum Depression and Postpartum Anxiety, only few have focused on barriers that prevent the birthing mother from seeking mental health care and their treatment preferences. **Objectives:** (1) Assess the prevalence depression, anxiety, and perceived stress. (2) Identify the barriers to seeking care and preferences for treatment.(3) Assess the association of demographics with mental health symptoms in postpartum people. **Methods:** A cross-sectional Qualtrics survey was distributed via the social media platform Reddit between July 8, 2022 and August 8, 2022. Anyone who reported giving birth in the last 12 months was included. Those unwilling to consent were excluded. The university's IRB approved the study. The survey encompassed questions about participant demographics, mental health, barriers to treatment, and preferences. The Edinburgh Postnatal Depression Scale (EPDS), Generalized Anxiety Disorder 2-item (GAD-2) and the Perceived Stress Scale (PSS) were used to screen for depression, anxiety, and stress, respectively. All statistical analyses were conducted using StataIC 15. Continuous data are reported as means and standard deviations and categorical data are reported as numbers and percentages. Multi-variable logistic regression was used to assess the association of demographic variables with mental health. **Results:** A total of 580 individuals participated in the study. The participants had a mean age of 29.5 $\pm$ 4.7. The majority were Caucasian (57.8%) and heterosexual (90.7%). Many participants screened positive for depression (70.3%) and anxiety (52.9%). Distance to facility, time management, and lack of social support were the top barriers to seeking mental health treatment. Participants were most comfortable receiving healthcare from their obstetrician during pregnancy. Hispanic race was negatively associated with depression, while having some college, a college degree, or graduate degree were negatively associated with anxiety. Identifying as bisexual as well as having more children were associated with greater perceived stress. **Conclusions:** Depression and anxiety symptoms were prevalent postpartum. Multiple barriers faced birthing people seeking healthcare. Identifying barriers and associations of demographics with mental health symptoms are the beginning steps to addressing gaps in perinatal mental healthcare.

Agitation in the Emergency Department: Are Patients That Receive Droperidol Less Likely to Require Rescue Medications Versus Those That Receive Olanzapine

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Type: Original Research. **Purpose:** Agitation is a common phenomenon in the emergency department (ED) and is treated with a variety of medications. Droperidol, a dopamine-blocking antiemetic, has become increasingly popular in agitation due to reportedly faster sedation and

decreased need for rescue medications (RM) defined as any additional medication(s) needed for agitation management after administration of the initial regimen. The purpose of this project is to evaluate the use, efficacy, and safety of droperidol (intramuscular (IM), intravenous (IV)) versus olanzapine (IM, oral disintegrating tablet (ODT)) when given for agitation in the ED. **Methods:** Researchers conducted a single-center, retrospective chart review of 116 adult veterans at the South Texas Veterans Health Care System (STVHCS) ED who received either IM droperidol (IMD), IV droperidol (IVD), IM olanzapine (IMO), or ODT olanzapine (ODO) for agitation between December 1, 2020 through October 31, 2022. Individuals were excluded if they were non-veterans, received droperidol or olanzapine for non-agitation purposes, had known allergies to droperidol or olanzapine, were hemodynamically unstable, or in acute alcohol withdrawal. The primary outcome was medication efficacy, defined as administration of a RM within 12 hours of initial medication administration. Secondary outcomes included time to psychiatric evaluation and safety data. **Results:** Forty-five veterans met inclusion criteria, receiving IMD (n = 4), IVD (n = 6), IMO (n = 9), or ODO (n = 26). Veterans were an average age of 50 years and the majority were male. Non-mental health-related chief complaints were the most prevalent across all groups, however, 100% of included patients had at least one mental health diagnosis. Patients who received droperidol required RM more frequently, but the difference was not statistically significant (χ^2 [3, n = 45] = 1.62, P = .66). Use of RM was least frequent in patients receiving IMO. Despite the need for agitation management, less than half of the veterans in each group were evaluated by psychiatry. Safety data was similar between groups. **Conclusions and Future Directions:** Parallel to recent positive findings, droperidol appears to have similar efficacy and safety as olanzapine when administered to a small population of veterans who required medication management of agitation in the ED.

Antidepressant Medication Adherence in a Community Pharmacy Setting Before and After Onset of the COVID-19 Pandemic

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Type: Original Research. **Background:** Some studies in the US have shown decreased adherence rates during the COVID-19 pandemic for medications used for asthma, HIV, and rheumatic disease. A survey found self-reported difficulties with medication adherence during the pandemic in those with psychiatric disorders, but there is a lack of studies that have measured actual adherence rates to psychiatric medications. **Objectives:** The primary objective was to compare antidepressant adherence rates and percentage of patients with acceptable antidepressant adherence rates after pandemic onset versus before pandemic onset. The secondary objective was to determine whether these outcomes were affected by age, sex, insurance coverage, and maintenance medical or psychiatric medications other than antidepressants. **Methods:** The study was a retrospective review that received university IRB approval. The site was one independent community pharmacy that did not alter hours of operation during the pandemic. The time periods of the study were the 6 months before (pre-pandemic) and 6 months after (post-pandemic) the index date of March 11, 2020. Inclusion criteria included adult patients receiving therapeutic doses of an antidepressant medication with a minimum of two fills in the pre-pandemic period. A power analysis revealed the need for 201 patients, who were then randomly selected via number generator from 418 eligible patients. The medication possession ratio (MPR) and MPR at least 80% were calculated and compared statistically between the two time periods using a paired sample *t*-test and Fisher's exact test, respectively. The effects of patient subgroups were analyzed using multiple regression. **Results:** The mean MPR decreased from 80.4% (pre-pandemic) to 64.6% (post-pandemic) ($P < .001$). The percentage of patients with MPR at least 80% decreased from 69.7% (pre-pandemic) to 50.7% (post-pandemic) ($P < .005$). Mean MPR and percentage of patients with MPR at least 80% decreased from pre-pandemic to post-pandemic periods across all patient subgroups with no statistically significant effect of patient subgroups on the primary outcome variables. **Conclusions:** Adherence to antidepressants significantly decreased after onset of the COVID-19 pandemic for patients at a community pharmacy. These findings suggest the need for community pharmacists to identify opportunities to improve antidepressant adherence during future health care crises.

Assessing As-Needed Medication Usage Frequency in Patients With Schizophrenia and Schizoaffective Disorder on Antipsychotic Medications for Acute Agitation

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Type: Original Research. **Purpose:** Patients diagnosed with schizophrenia and schizoaffective disorder are frequently noncompliant with their medications, due in part to the disease-state itself, and due to side effects brought upon by the typical and atypical antipsychotics, at times as-needed medications for agitation, such as lorazepam. Although they have different side effect profiles, antipsychotics are

generally equally efficacious, and can even be compared using chlorpromazine equivalents; for example, 2 mg of haloperidol is equivalent to 100 mg chlorpromazine. This project was designed to determine whether higher chlorpromazine equivalents (over 500 mg) are linked to higher frequency of as-needed medication use. **Methods:** The institutional review board approved this retrospective cohort study; women and men aged 18 and up admitted to the inpatient psychiatric facility were included if they had a diagnosis of schizophrenia or schizoaffective disorder, were at the facility during the study period (October 1 2020 through December 31 2021) and had at least one episode of agitation requiring as-needed medication. All patients were also being treated with either a typical or atypical antipsychotic; in total, 52 patients fit the study criteria. Data collected include diagnoses, data of episode, number of episodes, medication treating primary diagnosis, daily dose of the aforementioned drug (and its chlorpromazine equivalent dose), as-needed medications (including route, dose), and demographic data, such as race and gender. The primary outcome measure was an increase in as-needed medication usage (due to an episode) during the observation period. Data are expressed as means, and evaluation of the primary outcome utilized a Mann-Whitney U test. **Results:** Increased chlorpromazine equivalent levels (over 500 mg) were not linked to a higher likelihood for necessitating as-needed medication and episodes ($P = .231$). This *P*-value trends toward more as-needed medications being used at lower chlorpromazine equivalent levels, although non-significantly. **Conclusion:** Patients with higher chlorpromazine equivalents are at the same risk of experiencing episodes of agitation that would necessitate the use of as-needed medications, such as lorazepam. With this information, we can thus treat patients with more effective antipsychotic doses without worry of having episodes of agitation in the future and focus solely on side-effect profiles.

Assessing Behavioral Health Education and Training Needs of Pharmacy Personnel in Pennsylvania

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Type: Original Research. **Background:** Over a third of Americans live in areas without access to mental health resources. Pharmacy personnel are a trusted and accessible resource in the community, allowing them to be a point of contact for individuals needing behavioral health intervention. However, pharmacy personnel may not have easy access to training or the confidence to provide that support. **Objectives:** The purpose of this study was to identify the behavioral health knowledge and training gaps of pharmacy personnel in Pennsylvania. **Methods:** An electronic needs survey, accessed through a quick response (QR) code on distributed flyers or via email, was sent to members of the Pennsylvania Pharmacists Association. Survey items elicited respondents' self-reported comfort in providing certain behavioral health services, self-reported access to certain behavioral health-related resources, and knowledge on true-false behavioral health assessment questions. Certain demographic information (area of practice setting, type of community practice, job title) was selected a priori to determine if there were differences within the subcategories. Chi-square tests of independence were performed to determine statistical significance; α was set at 0.05. **Results:** In total, 140 respondents completed the survey, with the majority identifying as pharmacists (54%) and practicing in a suburban setting (52%). A minority of respondents reported feeling comfortable assessing an individual for risk of suicide or harm (41%) and having access to and/or being able to refer patients to local homeless shelters (32%); a minority of respondents answered all Mental Health First Aid-related assessment questions correctly (43%). A statistically significantly higher percentage of pharmacists were comfortable providing information on behavioral health conditions compared to non-pharmacist personnel (64% vs 41%, $P = .01$) but not for other statements. There was no statistically significant difference in reported comfort by area of practice setting or by type of community practice. **Conclusions:** This study demonstrates that pharmacy personnel have some level of knowledge and comfort with providing behavioral health services, but there are gaps in several areas. We expect that with additional tailored training, pharmacy personnel can become advocates who can address limitations of care for patients with behavioral health needs.

Assessing Underutilization of Mental Health Resources at an HBCU

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Type: Original Research. **Purpose:** In 2018, a survey was conducted with 271 students on Xavier University of Louisiana's (XULA) campus that showed a significant lack of utilization of both on- and off-campus mental health resources. Based on these results and previous findings, we hypothesize that the lack of utilization of mental health resources on a Historically Black College and University (HBCU) campus can be attributed to both internal and external barriers. A short electronic survey was administered to students to assess underutilization. The primary outcome

of this survey is to evaluate lack of utilization of mental health resources at an HBCU in order to effectively promote student mental wellness. **Methods:** A total of 159 students attending XULA were randomly recruited to complete a survey that assessed the utilization of mental health resources, and the lack thereof. All students currently enrolled at XULA were eligible for participation. All faculty, staff, other members of the XULA community including alumni, and outside affiliates were excluded. This survey was IRB approved by Xavier University of Louisiana. **Results:** Subjects were predominately African American (60.24%) and female (85.53%). The majority of students responded that they are currently not utilizing on-campus (91.82%) or off-campus resources (81.01%). When assessing barriers to mental health resources 34.25% of students responded that resources were not necessary; Similarly, 34.25% responded that time constraints limited their utilization. Almost half (50.44%) of students reported that their most beneficial coping mechanism is speaking with friends/family members. Further statistical analysis is pending. **Conclusions and Future Directions:** There are many barriers that can be attributed to this underutilization. According to the results of this survey, the majority of students lacked time to utilize or denied the need for any mental health resources. The results of this survey will allow for an opportunity to improve the utilization of mental health resources on XULA's campus.

Association Between Suicide Attempt and Substance Use

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Type: Original Research. **Background/Introduction:** Suicide, a leading cause-of-death, can be predicted by previous suicide attempt (SA). Many factors are associated with higher rates of both SA and substance use, though it is unclear if it persists after controlling for confounding variables. Primary aim was to determine if an association exists between SA and specific substance use (heroin, methamphetamine, inhalants, alcohol) after controlling for age, race, gender, sexual identity, income, and depression. Secondary aim was to determine high risk populations after controlling for substance use. **Methods:** This observational quantitative study analyzed the National Survey on Drug Use and Health 2019 dataset. History of SA was dependent and methamphetamine, heroin, inhalants, and alcohol were independent variables. Confounding variables (age, gender, race, sexual identity, income, depression) identified using Pearson's χ^2 . Primary logistic regression incorporated heroin, methamphetamine, alcohol, inhalants, depression, 18 to 20 years of age, multiracial, bisexual, and income <$20,000. Secondary regression expanded to include 18 to25 years of age, lesbian/gay, and Indigenous. Analyses were completed via the Stata-SE_2017 program. **Results:** Study population included 41,629 people, of which 425 had an SA. After multivariate adjustment, SA rate tripled with methamphetamine (odds ratio [OR]= 3.21 [95%CI2.02-5.40) and doubled with heroin (OR 2.09 [95%CI 0.99-4.44]), but not inhalants (OR 1.55 [95%CI 0.85-2.81]) or alcohol (OR 0.98 [95%CI = 0.86-1.43]). While heroin *P*-value was > .05, this was considered significant given the context of the opioid crisis. Adding to depression (OR 10.00 [95%CI 8.11-12.34]), age 18 to20 years (OR 2.16 [95%CI 1.73-2.70]), and income <$20,000 (OR 1.70 [95%CI 1.37-2.10]), higher SA rates occurred in bisexual (OR 1.39 [95%CI 1.28-1.50]) and multiracial (OR 1.14 [95%CI 1.07-1.20]) people. Race became more significant when including both multiracial and Indigenous people (OR 1.61 [95%CI 1.19-2.16]). **Discussion/Conclusion:** After adjusting for confounding factors, heroin and methamphetamine increased risk of SA, especially in people with multiple identities (for example, multiracial, Indigenous, bisexual) possibly because of feelings of not belonging in either group leading to exclusion and shame. This novel finding highlights the necessity of simultaneous suicide and substance use disorder prevention efforts and non-stigmatizing psychiatric treatment services, particularly focused on people with multiple identities.

Buprenorphine Microdosing in Inpatients with Acute Infectious Illness: A Retrospective Cohort Study

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Type: Original Research. **Purpose:** Buprenorphine initiation via microdosing is a novel treatment strategy for opioid use disorder which aims to minimize the opioid withdrawal symptoms associated with traditional buprenorphine initiation. This strategy may be especially beneficial in patients with acute medical illness, who often experience acute pain and may be unlikely to tolerate opioid withdrawal. The purpose of this analysis was to describe the practice of buprenorphine microdosing at one medical center and compare key discharge outcomes among patients with opioid use disorder and severe infections who underwent buprenorphine microdosing versus those who did not. **Methods:** We conducted a single-center, retrospective chart review of all patients with opioid-use disorder and select infectious diagnoses admitted from July 1, 2020 through August 30, 2022. Demographics, major surgeries during admission, discharge prescriptions for opioids and medica-

tions for opioid-use disorder, and readmission rates were collected. Patients who received buprenorphine microdosing were identified, and dosing, timing, and documented withdrawal symptoms during initiation were described. **Results:** Ninety-three admissions with diagnosis codes related to both opioid use disorder and severe infection were identified. Of these, 16 patients were prescribed buprenorphine via microdosing. Patients who received buprenorphine microdosing were more likely to be discharged on medications for opioid use disorder (88% vs 54%, *P*=.013) and intra-nasal naloxone (82% vs 40%, *P*=.001) compared to those who did not. Rates of opioid prescriptions at discharge were similar between groups. Most patients who underwent buprenorphine microdosing were started on a 20 mcg/hr transdermal patch and transitioned to sublingual buprenorphine after approximately 2 days. Withdrawal symptoms documented following buprenorphine initiation were infrequent and mild. Microdosing was not associated with a significant increase in length of hospitalization. **Conclusion:** This analysis demonstrates successful initiation of buprenorphine via microdosing in inpatients with opioid-use disorder and acute infectious illness, with minimal symptoms of opioid withdrawal. Among patients with opioid-use disorder admitted for severe infections, patients initiated on buprenorphine via microdosing may be more likely to be discharged with medications for opioid use disorder.

Clinical Conundrums of Clozapine on Consult Liaison Psychiatry

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Type: Original Research. **Background:** Clozapine is a second-generation antipsychotic (SGA) with labeled indications of treatment-resistant schizophrenia and suicidal behavior in schizophrenia and schizoaffective disorder. Despite its proven efficacy, its adverse effect profile, including ileus, severe constipation, agranulocytosis, cardiomyopathy, myocarditis, seizures orthostasis, and tachycardia, precludes its use as a first line agent. While these adverse effects are variably documented in the literature, there is no consensus or extensive literature to guide management of antipsychotic therapy when these issues occur. **Methods:** This is a retrospective cohort analysis of inpatient adult and pediatric inpatients with documented severe adverse events potentially related to clozapine at a single center. Patients included were admitted from January 1, 2012 through December 15, 2022. The primary outcome was to describe the frequency of severe clozapine-related adverse events (AEs) at an academic medical center. A severe AE was defined as an event that required temporary or permanent discontinuation of clozapine. Secondary outcomes included describing the course of therapy for patients unable to continue clozapine and alternative medication regimens if clozapine was discontinued, rate of psychosis relapse after clozapine discontinuation, length of stay (LOS), and readmission rate of patients with clozapine-related adverse events. **Results:** Forty-two (15.2%) of 277 total patients had their clozapine temporarily or permanently discontinued due to an adverse event. The most common AE warranting discontinuation was gastrointestinal (n = 16), with ileus, bowel obstruction, or constipation, and the most prescribed alternative antipsychotics were loxapine (n = 8) and olanzapine (n = 8). The average LOS was 36.9 days, 5 (11.9%) patients were re-admitted with the same adverse event, and 9 (21.4%) patients experienced psychosis relapse after clozapine discontinuation. **Conclusion:** This retrospective study showcases the importance of monitoring for adverse events of clozapine, as well as recognizing alternative contributing factors of these events. Furthermore, the rate of psychosis relapse upon clozapine discontinuation is an important consideration to make when making the decision to discontinue therapy. Next steps would be to identify gaps in the systems of care that may delay identification of severe adverse events.

Clozapine in Black Patients With Tardive Dyskinesia: Results of a 24-Week Open-Label Clinical Trial

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Type: Original Research. **Background:** Tardive dyskinesia (TD) is characterized by involuntary movements associated with neuroleptic medications and is potentially irreversible. Treatment options include dose reductions of the current psychotropic or switching to a different agent. Clozapine has

been shown to reduce severity and seldom exacerbates TD. Current literature is limited in determining risk factors associated with TD and predictors of response using clozapine, especially in Black patients. To our knowledge, our data is the largest Black population with schizophrenia treated with clozapine to date. **Objectives:** (1) Determine risk factors associated with tardive dyskinesia in Black patients. (2) Examine rate of clinical response for tardive dyskinesia in Black patients when switching from antipsychotics to clozapine **Methods:** This is a secondary analysis of a three-center prospective open-label study that enrolled 274 patients treated with clozapine for six months. The occurrence of tardive dyskinesia at baseline was defined as a score of 3 or greater on the Abnormal Involuntary Movement Scale (AIMS). We examined clinical variables associated with TD including medication use, demographics, diagnosis, smoking status, substance use history, ACKR1 genotype, extrapyramidal symptoms (Simpson Angus Scale) and psychiatric symptoms using BPRS. We also examined the efficacy of clozapine in reducing TD. Response was defined as 50% reduction in total AIMS scores. **Results:** Two-hundred seventy-one patients had baseline AIMS scores for analysis. Twenty-two of 271 (8%) met criteria for TD. Those with TD had older age (t=12.0, $P \leq .001$) and higher SAS scores (t=7.1, $P = .008$). Fewer in the TD group were treated with first-generation antipsychotics ($\chi^2 = 5.718$, $P = .017$) and antihistamines ($\chi^2 = 4.611$, $P = .032$) and more in the TD group were taking vitamins ($\chi^2 = 5.614$, $P = .018$). During the 24-week study, 20/22 (91%) had a $\geq$50% reduction in TD scores. Mean scores in the TD group decreased by over 70% from 11.1 $\pm$ 7.6 at baseline to 3.1 $\pm$ 5.4 at endpoint (F=19.01, $P < .001$). **Conclusion:** Participants with TD were likely to be older and have extrapyramidal symptoms prior to clozapine. Tardive dyskinesia was associated with lower use of first-generation antipsychotics, less antihistamine use, and higher vitamin usage. Clozapine was associated with a robust improvement in TD and an important therapeutic option in TD.

Comparing the Pharmacokinetics, Efficacy, Tolerability, and Accessibility of Viloxazine Versus Atomoxetine

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Type: Original Research. **Purpose:** Atomoxetine and viloxazine are norepinephrine reuptake inhibitors considered second-line agents approved for use in attention deficit hyperactivity disorder (ADHD) in children 6 years and older. This project compares the pharmacokinetics, efficacy, tolerability, and cost of atomoxetine versus viloxazine to help guide treatment when stimulants cannot be used. **Methods:** An electronic database search between January 1, 2001 and September 1, 2022 identified no trials comparing use of atomoxetine versus viloxazine. Therefore, information from the manufacturer's prescribing information was utilized to compare information about dosing, pharmacokinetics, adverse effects, warnings and precautions. Seven clinical trials involved in the FDA approval of these medications in children were evaluated [atomoxetine (n = 4), viloxazine (n = 3)] for information regarding the efficacy of viloxazine and atomoxetine. This information was compiled into tables to make clinically relevant comparisons of these two agents using multiple ADHD rating scales like: ADHD Rating Scale IV, ADHD Rating Scale V, and the Clinical Global Impressions- Improvement Score. **Results:** Efficacy was demonstrated in a change from baseline on the ADHD Rating Scale-IV for atomoxetine and ADHD Rating Scale-V for viloxazine. Both medications demonstrated significant improvement over placebo on total score, and inattention and hyperactivity subscales. When comparing the pharmacokinetics, both are metabolized primarily by the liver. Viloxazine is a strong cytochrome P450 (CYP)1A2 inhibitor and is contraindicated with sensitive CYP1A2 substrates or those with a narrow therapeutic window. Atomoxetine requires hepatic dose adjustments and contains a warning for concomitant use with poor CYP2D6 metabolizers or potent CYP2D6 inhibitors versus viloxazine requires renal dose adjustments. Atomoxetine is approved for weight-based dosing, while viloxazine is approved for fixed-dosing based on age. Adverse effects are comparable and include nausea, vomiting, fatigue, somnolence, insomnia, and decreased appetite. Viloxazine is available brand name only and may carry a higher cost burden than generically available atomoxetine. **Conclusion:** Atomoxetine and viloxazine may be utilized as second-line therapies in pediatric ADHD and demonstrated comparable efficacy and tolerability. Viloxazine may work faster, but is only available brand name, and may have financial barriers. Trials directly comparing atomoxetine and viloxazine are warranted.

Cost-Effective Analysis Between Valbenazine and Deutetrabenazine in a Veteran Population

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Type: Original Research. **Background:** Tardive dyskinesia (TD) is a movement disorder characterized by involuntary movements of the tongue, jaw, extremities, and trunk. Patients receiving long term antipsychotic treatment are at risk for developing TD, which can persist as an irreversible,

lifelong condition. Tardive dyskinesia is associated with decreased quality of life, social withdrawal, and significant financial burden. The FDA approved treatments of TD are limited to valbenazine and deutetrabenazine, which act by inhibiting vesicular monoamine transporter 2 (VMAT2) to regulate the storage and release of dopamine from synaptic vesicles. The purpose of this study is to evaluate the cost effectiveness of valbenazine and deutetrabenazine. **Methods:** A multi-center, retrospective chart review was conducted for patients in the Veterans Health Administration (VHA). Patients receiving valbenazine or deutetrabenazine for treatment of TD from January 1, 2017 through July 31, 2021 were identified using the VA Business Intelligence Services Line Pharmacy Prescription database. The primary and secondary objectives were to evaluate the annual cost of medication per 1-point reduction in Abnormal Involuntary Movement Scale (AIMS) score ($/AIMS unit) and change in baseline AIMS score, respectively. Safety endpoints included QTc prolongation, depression/suicidality, and extrapyramidal symptoms. **Results:** One-hundred and twenty-eight patients were identified in which 106 patients were excluded. The review included 22 patients of which 7 (31.8%) patients received deutetrabenazine, and 15 (68.2%) patients received valbenazine. Schizophrenia/schizoaffective disorder was the primary psychiatric condition in 13 (59.1%) patients, and 21 (95%) patients continued antipsychotic treatment while receiving valbenazine or deutetrabenazine. The average baseline AIMS for patients in the study was 12.2. The $/AIMS unit in the valbenazine was $13,082.21 compared to $10,825.27 in the deutetrabenazine group ($P = .27$). The average change in AIMS score was -5.4 in the valbenazine group and -6.6 in the deutetrabenazine group ($P = .23$). The incidence of QTc prolongation ($P = 1$), depression/suicidality ($P = .27$), sedation ($P = .65$), and extrapyramidal symptoms ($P = .14$) was comparable between the groups. **Conclusions:** A statistically significant difference in cost-effectiveness, reduction in AIMS score, and adverse effects was not seen between valbenazine and deutetrabenazine.

Cross-Mapping the Outpatient Best Practice Model Statements With BCPP and CMM Components

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Type: Original Research. **Purpose:** The American Association of Psychiatric Pharmacists is developing a best practice model for outpatient psychiatric pharmacy to improve standardization across practices and support advocacy efforts. Since initiating development in 2020, the task force has developed a set of 28 core attribute statements that are the basis of the model. While development continues, determining how well these statements correlate to Board-Certified Psychiatric Pharmacist (BCPP) components, the standard for psychiatric pharmacy, and Comprehensive Medication Management (CMM) components, which is proposed as the standard for clinical pharmacy care, will enhance the model's validity. **Methods:** The 28 attribute statements of the model were cross-mapped to the 62 components of the BCPP Exam Content Outline from the Board of Pharmaceutical Specialties and the 13 essential components of the CMM process of care. Each model statement was determined for alignment with the core meaning of each of the BCPP and CMM components by the author. Correlation rates were determined both for each of the 28 model statements and for each of the BCPP and CMM components. **Results:** All but two (active pharmacist license, and PharmD and BCPP attainment) of the 28 attribute statements mapped to at least one of the 62 BCPP components, and all statements mapped to at least one of the 13 CMM components. Statement #9 on using CMM within the practice mapped to the most BCPP components (43.6%), and statement #23 on having site support to track practice outcomes mapped to the most CMM components (53.9%). Conversely, all BCPP and all CMM components had at least one statement mapped to them, with BCPP component 3.16 on effective collaborative practice agreements (10 statements) and the CMM practitioner training component (11 statements) having the greatest correlation. **Conclusions:** The high degree of correlation between the model statements and the components of both the BCPP content outline and CMM practice management demonstrates how well the model incorporates each within it. It also suggests that a BCPP who is competent in all content outline areas, maintains current knowledge and skills, and practices CMM with fidelity likely has a significant degree of each best practice model attribute within their own outpatient practice.

Development of the Core Outcome Set for Psychiatric Pharmacists

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Type: Original Research. **Purpose:** The American Association of Psychiatric Pharmacists sought to develop a consensus-based minimum set of outcomes to standardize core outcome measures. These measures can then be used to

study the impact of psychiatric pharmacists in caring for individuals living with psychiatric disorders across the mental health continuum. **Methods:** A committee reviewed a previously compiled catalog of 194 articles and 40 posters that referenced psychiatric disorders, patient-level outcomes, and pharmacist interventions. From these initial 234 articles, 554 initial combinations of outcomes and measures were identified. Additional papers, guidelines, and feedback from experts were also reviewed, which increased the number to 586 combined outcomes and measures. The principal investigator normalized the list by disease state, outcomes, and measures which reduced the total number of outcomes to 46. Then 631 participants were invited to complete a survey rating the measures on five key factors. The measures were rated on whether they were comprehensive, attributable, feasible, scientifically sound, and usable. Nineteen participants rated the outcomes. Twenty-one board certified psychiatric pharmacists volunteered to participate in the next step of the process, a summit meeting. Eighteen ultimately participated. During the summit, outcomes were advanced by participants for review, and then reviewed seeking consensus on which measures met pre-identified inclusion criteria. The participants then reviewed and voted on each measure to finalize the outcomes measures. **Results:** The final core outcome set included 44 outcomes, 37 of which included at least 1 measure (84 total measures). The poster will report on the final outcome measures, limitations, and conclusions.

Efficacy and Safety of Iloperidone in Acute and Mixed Mania Associated With Bipolar I Disorder: A Double-Blind, Placebo-Controlled, Phase III Study

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Vanda Pharmaceuticals Inc, Washington

Type: Original Research. **Objective:** This phase 3 trial evaluated the efficacy, safety, and tolerability of iloperidone in adult patients meeting DSM-5 criteria for bipolar I disorder with acute manic or mixed episodes. **Method:** A multicenter, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of iloperidone for 4 weeks in the treatment of adult patients with acute manic or mixed episodes associated with bipolar I disorder. After a pre-randomization evaluation phase, patients were randomly assigned to iloperidone or placebo groups for a short-term double-blind treatment phase of 4 weeks. Most patients in the iloperidone group were titrated up to 24 mg/day (12 mg twice daily) within 4 days and then maintained at that dose for study duration. The primary measure of efficacy was change from baseline to endpoint (Day 28) in Young Mania Rating Scale (YMRS) total score. Secondary efficacy parameters included change from baseline in the Clinical Global Impressions Severity of Illness (CGI-S) score and Clinical Global Impressions of Change (CGI-C) score at Day 28. Post hoc analysis included change from baseline in YMRS single items Weeks 1 to 4. **Results:** A total of 392 eligible patients were randomized and dosed with either iloperidone (n = 198) or placebo (n = 194). Results were assessed by comparing iloperidone to placebo using the restricted maximum likelihood (REML)-based mixed-effects model for repeated measures (MMRM). Statistically significant benefit in the iloperidone group over placebo was observed as early as Week 2 ($P = .039$) and progressively increased through Week 4 ($P < .001$). Individual YMRS subscale items also showed increased improvements in the iloperidone group versus the placebo through week 4. The iloperidone treated group also achieved statistical significance at week 4 compared to placebo in CGI-S and CGI-C ($P < .001$ and $P < .001$, respectively). **Conclusions:** Results of this study demonstrated that iloperidone at 24 mg/day (12 mg bid) was more effective than placebo in treatment of acute manic or mixed episodes associated with bipolar I disorder. Treatment was *associated* with acceptable tolerability and safety profiles that were consistent with those seen during the previous clinical studies in patients with schizophrenia and no new safety concerns were identified for this population. **Trial Registration:** ClinicalTrials.gov: NCT04819776; EudraCT: 2020-000405-83

Efficacy of Long-Acting Injectable Antipsychotics Versus Oral Antipsychotics in Preventing Psychiatric Rehospitalizations

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Type: Original Research. **Purpose:** Non-adherence to antipsychotic medications has been linked with increases in rehospitalizations and worsening of psychiatric illness. Long acting injectable (LAI) antipsychotic medications are injected intramuscularly and are designed to be administered less frequently than oral medications. Due to conflicting evidence, there is still debate regarding which formulation is best suited to increase patient adherence, lower psychiatric rehospitalization, and improve patient outcomes. The purpose of this study is to evaluate psychiatric readmission rates of patients on oral antipsychotics with those discharged on LAI antipsychotics. **Methods:** This is an institutional review board-approved single-center, retrospective chart review of patients 18 years of age and older, admitted for psychiatric exacerbation of schizophrenia or schizoaffective disorder and discharged on

at least one antipsychotic between August 1, 2019, and June 30, 2022. The primary outcome was psychiatric rehospitalizations within 30 days of first admission. Patients were evaluated for the following secondary outcomes: psychiatric rehospitalizations occurring after 30 days and within six months of admission as well as rehospitalizations occurring after six months and within one year from admission. Descriptive statistics were utilized to analyze the primary and secondary outcomes. Statistical significance was defined as $P < 0.05$. **Results:** Of 1574 patients screened, 343 patients met inclusion criteria for the primary outcome. Of these patients 103 (30%) were discharged on a LAI and 240 patients (70%) were discharged on an oral antipsychotic. Twenty-two of the 343 patients were readmitted within 30 days. The LAIs were associated with significantly lower rates of rehospitalizations at 30 days than oral antipsychotics (1.94% vs 8.33%, $P = .03$). Lastly, patients on LAIs received greater chlorpromazine equivalence of antipsychotic therapy (477.32 mg) than those receiving oral medications (278.59 mg). **Conclusion:** The study demonstrates that LAI antipsychotics are effective at preventing rehospitalizations 30 days after discharge. However, this was not replicated over six months or one year which may be attributable to disease progression. While our study suggests that LAIs provide short-term efficacy, further research is warranted to identify if early LAI intervention may prevent long-term rehospitalizations.

Esketamine Nasal Spray Versus Quetiapine Extended Release in Patients with Treatment-Resistant Depression: A Subgroup Analysis of the ESCAPE-TRD Study

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Type: Original Research. **Background:** Results from ESCAPE-TRD (NCT04338321), a randomized, open-label, rater-blinded, long-term, phase 3b trial, demonstrated benefits for esketamine nasal spray (ESK) versus quetiapine extended release (XR) for the acute and maintenance treatment of adult patients who have treatment-resistant depression (TRD) with current moderate to severe depressive episode. **Objective:** This subgroup analysis of ESCAPE-TRD evaluated the effects of ESK versus quetiapine XR in adult patients with TRD who received treatment according to US prescribing information dosing guidance. **Methods:** Patients aged 18 to 64 years received flexibly dosed ESK (56 or 84 mg, consistent with US label dosing) or quetiapine XR, both in combination with an ongoing oral antidepressant, in the acute and maintenance phases. Rates of remission (defined as Montgomery-Åsberg Depression Rating Scale [MADRS] total score of $\leq$ 10) at week 8 and rates of remission at week 8 without subsequent relapse through week 32 were compared between groups. The percentage of patients with response ($\geq$ 50% reduction in total MADRS or MADRS total score $\leq$ 10) or remission at each visit were also assessed using a last observation carried forward approach. Treatment-emergent adverse events (TEAEs) are summarized descriptively. **Results:** Among 636 randomly assigned patients, remission rates were significantly higher at week 8 with ESK versus quetiapine XR (26.6% vs 18.1%; $P = .009$). Furthermore, a significantly greater proportion of patients achieved remission at week 8 and did not experience relapse through week 32 with ESK versus quetiapine XR (21.2% vs 14.4%, respectively; $P = .020$). The percentage of patients in remission increased over time in both treatment groups and was numerically higher in the ESK group compared with quetiapine XR. Tolerability results were consistent with known profiles for each therapy. TEAEs occurred in 86.3% of patients in the ESK group and 68.7% of patients in the quetiapine XR group during the acute phase and in 92.0% and 78.5% in the maintenance phase, respectively. **Conclusions:** The results of this subgroup analysis of adult patients with TRD treated according to US label were consistent with the overall study population and demonstrate that ESK improves short- and long-term outcomes compared to quetiapine XR.

Evaluating the Impact of COVID-19 Hospitalization on New-Onset Depression, Dementia, and Healthcare Utilization in a Nationwide Veterans Health Administration Observational Cohort Study

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Type: Original Research. **Purpose:** Hospitalized patients with COVID-19 have an increased risk of developing psychiatric symptoms associated with post-COVID-19 syndrome. We aimed to evaluate the impact of COVID-19 hospitalization on new-onset depression and dementia as well as healthcare utilization. Findings may be beneficial in navigating post-discharge care plans and in providing important insights related to the impact on healthcare for the veteran population. **Methods:** This nationwide, retrospective, observational cohort study included hospitalized COVID-19 patients aged 18 years or older across the Veterans Health Administration database from January 1, 2020 through January 1, 2022. The COVID-19 group consisted of patients hospitalized for COVID-19 with a positive test within seven days of the hospitalization. The

control group consisted of patients hospitalized for reasons other than COVID-19 without a prior positive test or during the study duration. Baseline information including medication use and comorbidities were collected two years prior to the index date of hospitalization. Propensity scores were utilized for 1:1 matching. The primary outcomes were new-onset depression and dementia 180 days post-hospitalization. Healthcare utilization outcomes included the number of psychiatry-related inpatient hospitalizations and outpatient mental health appointments at 180 days post-hospitalization. **Results:** Veterans in the matched cohort had a median age of 69 years and 93% were male in both groups, mean body mass index was 31 kg/m^2 in the COVID-19 group and 29 kg/m^2 in the control group, and 63% and 64% were white in the COVID-19 and control groups, respectively. The primary outcomes were found to have a significant association with COVID-19 hospitalization for both new-onset depression (odds ratio (OR) 1.26 [95%CI 1.21-1.32]) and new-onset dementia (OR 2.46 [95%CI 2.39-2.53]). Psychiatry-related hospitalizations incidence rates were significantly higher in the COVID-19 group at both 90 days (incidence rate ratio [IRR] 1.20 [95%CI: 1.17-1.21]) and 180 days (IRR 1.15 [95%CI 1.13-1.17]). Patients in the COVID-19 group had a significantly higher rate of outpatient mental health visits at 180 days (IRR 1.11 [95%CI 1.09-1.23]). **Conclusion:** This study shows that COVID-19 hospitalization is associated with a significantly increased risk of new-onset depression and dementia as well as mental health related inpatient and outpatient healthcare utilization.

Evaluation of Appropriate Lithium Monitoring in a Hospital System

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Type: Original Research. **Background:** Verification of appropriate clinical monitoring for veterans prescribed lithium should be completed on an ongoing basis to ensure safety. The Veterans Affairs (VA) Clinical Practice Guideline for Management and Treatment of Bipolar Disorder recommends a lithium blood level be drawn every three to six months among stable outpatients and more frequently during titration. Other monitoring parameters such as serum creatinine, thyroid stimulating hormone (TSH), and electrocardiogram (EKG) should be assessed annually. **Purpose:** To evaluate the monitoring of lithium at the Salisbury VA Healthcare System. **Methods:** As phase one, retrospective chart reviews were performed for 125 veterans with an active lithium prescription at the Salisbury VA Healthcare System from May 1, 2022 to December 1, 2022. Baseline demographics were collected. Mental health indication for lithium use was documented. Monitoring frequency for lithium serum level, serum creatinine, TSH, and EKG was assessed to determine if recommended guidelines were followed. Lithium levels were documented to determine if they were within goal ranges. In phase two, appointments will be offered by clinical pharmacists to veterans who are due for a lithium level. Data will be gathered for number of veterans seen, lithium levels collected after pharmacist follow-up, and interventions accepted. Study will be analyzed using descriptive statistics. **Results (preliminary):** A total of 125 Veterans met the inclusion criteria. Gender differences were male (n = 102, 81.6%) vs female (n = 23, 18.4%). The mean average age was 52 years. Indications for lithium included: bipolar (n = 90, 72%), bipolar Depression (n = 10, 8%), depression (n = 25, 20%). Lithium level was appropriately checked in 65.6% (n = 82) of veterans. Lithium serum level met goal range in 63.4% (n = 52) of veterans. Serum creatinine, TSH, and EKGs were checked appropriately for 92.8% (n = 116), 80.8% (n = 101), and 18.4% (n = 28) of veterans, respectively. No lithium toxicity was found in this study. Further data for phase two will be collected and analyzed. **Conclusions:** Salisbury VA may benefit from further optimization of lithium monitoring. Clinical pharmacists may play a key role in educating both providers and veterans on the importance of clinical monitoring. Further conclusions may be made following assessment of phase two data.

Evaluation of Major Adverse Events and Drug Discontinuation of Clozapine Based on Accordance to an International Adult Titration Guideline

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Type: Original Research. **Purpose:** Clozapine is the only antipsychotic approved for treatment resistant schizophrenia, but without appropriate monitoring is associated with potentially fatal outcomes. An International Adult Clozapine Titration Guideline categorizes patients into normal or slow metabolizers based on ancestry, sex, obesity status, drug-drug interactions, and smoking status. Categorization aims to identify more appropriate rates of clozapine titration to reduce the risk of adverse drug reactions (ADRs). The guideline also recommends regular C-reactive protein (CRP), and clozapine concentration monitoring. This project aims to assess the applicability of this international clozapine titration guideline on associated ADRs reported and discontinuation. **Methods:** A retrospective chart review assessed clozapine titration schedules, laboratory monitoring parameters, major ADRs, and discontinuations for

clozapine naïve adult psychiatric inpatients at a single center from January 1, 2013 to June 1, 2022. Each patient's cumulative weekly clozapine dosage was compared to their guideline recommended dosage, to create a percent accordance to the international guideline. Linear logistic regression (R 4.2 Software) was used to evaluate the relationship between titration speed and the presence of an ADR or discontinuation. Descriptive statistics evaluated laboratory monitoring parameters. **Results:** A total of 43 unique patients were included in the analysis, with the majority being European/Western Asian males with schizophrenia. An inverse relationship was found between the last inpatient week clozapine dose percent accordance and the probability of an ADR, potentially stemming from reverse causation in which patients thought to have increased ADR risk received lower doses. Non-obese patients were less likely than obese to experience an ADR (Odds Ratio = 0.17, 95% CI: 0.03-0.99). Weekly CRP and clozapine concentration monitoring was suboptimal per guideline recommendations. **Conclusion and Future Directions:** Based on our small sample size of primarily European/Western Asian males, more aggressive clozapine titrations did not increase major ADRs or drug discontinuation. Future studies with more genetically diverse ethnic samples will be needed and should focus on specific ADRs which have previously been suggested to have increased occurrence with rapid titrations. Obese patients were at higher risk of an ADR correlating with the recommended slower titration of the International Titration Guideline.

Evaluation of Medications for Opioid Use Disorder Utilization During Medical Inpatient Hospitalization

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Type: Original Research. **Background:** Opioid use disorder (OUD) is a chronic brain disease that comes with serious consequences. Medications for opioid use disorder (MOUD) refer to the use of buprenorphine, methadone, or naltrexone to achieve remission or maintain recovery in patients with OUD. Despite MOUD being a highly effective treatment approach, it is often underutilized in healthcare. This study aims to characterize the use of MOUD for patients with opioid use disorder admitted to medical units of a community hospital. **Methods:** Patients aged 18 years and older admitted medically to an inpatient hospital between May 1, 2022 and July 31, 2022, with International Classification of Diseases, Tenth Revision code F11: opioid related disorders were included in the study. Patients were excluded if opioid was used for pain management, if admitted to a psychiatric unit, and if transferred from or to an outside hospital. Data collection included age, sex, race, primary diagnosis, appropriateness of the clinical opiate withdrawal scale (COWS) order, and the number of discharges against medical advice (AMA) and complete discharge plans. The type of MOUD, use of MOUD prior to admission, and the time from admission order to first dose of MOUD administration were also collected. **Results:** A total of 80 patients met the eligibility criteria, in which 4 patients reported being in recovery without the need of MOUD and 27 patients were treated with MOUD. The percentage of MOUD utilization was 35.5% (27/76 patients). The COWS was inappropriately not ordered in 46.7% of the patients (37/80 patients). In terms of discharge, 17 out of 80 patients left AMA but 42 out of 80 patients received or were connected to substance abuse resources prior to discharge. Of 27 patients treated with MOUD, about 77.8% (21 patients) were continuation from outpatient MOUD. Mean time between an admission order and first administration of MOUD to patient was 35 hours (+32.5 hours; range: 4.5-140.5 hours). **Conclusion:** The percentage of MOUD utilization in the medical units was low. However, this study provides insight into some opportunities to implement changes to our system to improve MOUD utilization for patients with OUD during medical inpatient stay.

Examining Mental Health Effects of Hormonal Contraceptives in Women Veterans

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Type: Original Research. **Purpose:** Use of hormonal contraception has been associated with a first diagnosis of depression and use of an antidepressant, and adverse mood changes are commonly cited as a reason for discontinuation. Despite this, associations between the use of hormonal contraception and mood changes remain inadequately studied and addressed in clinical practice. The purpose of this study is to evaluate the mental health effects of veterans who were diagnosed with a depressive or anxiety disorder within 1 year of initiating a hormonal contraceptive. **Methods:** A report was generated to include all female veterans of childbearing age prescribed new hormonal contraception within a Veterans Health System from September 1, 2017 to August 31, 2022. Women without baseline mental health disorders who were diagnosed with a new depressive or anxiety disorder within 1 year of starting hormonal contraception were included in the study. Women who were prescribed hormonal contraception for less than 1 year or whose diagnoses were documented within 1 week of starting hormonal contraception were excluded. **Results:** A total of 1141 female veterans were prescribed hormonal contraception during the study timeframe. Of these, 217 veterans (19%) were diagnosed with a

depressive or anxiety disorder after initiation, and 90 (8%) were diagnosed within the first year. After 16 veterans were excluded, 74 were included in the study, of which 40 veterans were diagnosed with a new anxiety disorder, 39 with a depressive disorder, and 6 with a mixed anxiety/depressive disorder. Additionally, 54 veterans (73%) either started or increased their doses of an antidepressant or anti-anxiety medication during the study timeframe, and 1 veteran was hospitalized for a mental health diagnosis. Most veterans had at least one documented Patient Health Questionnaire-9 (PHQ-9) or PHQ-2 score during the study period, but 31% did not and 61% did not have a documented Generalized Anxiety Disorder 7-item scale score during the study period. **Conclusions:** This study found that veterans diagnosed with a depressive or anxiety disorder after initiation of hormonal contraception often require medication initiation or adjustment, and identified a gap in ensuring that patients receiving hormonal contraception are being regularly assessed for mood disturbances. Further studies are needed to evaluate the effects of hormonal contraception on mental health.

Examining the Clinical Utility of Pharmacist-Led Service Reviewing Aberrant Urine Drug Screens

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Type: Original Research. **Background:** Urine drug screens (UDS) are a critical risk mitigation intervention to ensure safety and adherence to controlled substances, primarily opioids. The Veterans Affairs (VA) developed the Stratification Tool for Opioid Risk Mitigation (STORM) dashboard to improve safety and monitor risks for overdose and suicide. There are two different types of UDS: the initial UDS is performed via immunoassay, and a quantitative (confirmatory) test is performed via mass spectrometry. Due to workload, time constraints, or unfamiliarity, providers may not be able to properly address aberrant UDS results in a timely manner. The purpose of this study is to evaluate the benefit from a dedicated service to ensure timely follow-up of aberrant UDS. **Methods:** Patients were identified using a dashboard reporting unexpected UDS results (negatives and positives) based on the patient's active medications. Results were excluded if they were appropriately addressed by providers in the patient chart. Results were addressed accordingly (ie, ordering confirmatory UDS, make recommendations for further consults, etc.) by pharmacists and documented in patient charts. De-identified patient data were collected in a protected, secure spreadsheet. The primary outcome for this analysis were the number of encounters made by pharmacists while managing UDS clinic. The secondary outcomes include pharmacist time spent with UDS interpretation and types of recommendations/interventions made by pharmacists. **Results:** Ninety-nine patients were identified via dashboard for inclusion into chart review. Pharmacists completed a total of 134 encounters, through a combination of initial and follow-up recommendations. The average time for initial encounter was 10 minutes (range 5-22 minutes), and the average time for follow-up encounters was 5 minutes (2-14 minutes). The average total encounter time was 14 minutes per patient. Fifty-four confirmatory UDS were ordered, of which twenty-one results were unexpected. Twelve repeat UDS were recommended. Pharmacists recommended a total of ten specialty referrals, nine to the Controlled Substance Advisory Panel and one to Mental Health clinic. **Conclusions:** Pharmacist review of aberrant UDS yielded a significant amount of relevant recommendations without substantial use of time. These recommendations help to improve patient safety and reduce provider workload.

Exploring the Influence of Psychosocial Interventions on Cancer Treatment Outcomes in Patients with Co-morbid Mental Health Conditions

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Type: Original Research. **Purpose:** Patients with cancer are at high risk of developing psychiatric conditions during their treatment course. The severity of their psychiatric illness(es) can significantly affect the length of hospital stay, treatment adherence and efficacy, prognosis, and quality of life. Psycho-oncology is an emerging and debated field that aims to address the impact of psychosocial issues on health outcomes of patients. Increasing awareness of mental health conditions and exploring potential interventions to address psychosocial issues can improve outcomes for cancer patients. **Methods:** A literature review was conducted via PubMed and Medline using the search terms cancer [patients], mental health [treatment], neoplasms [psychology], and mental health disorders. Studies were selected for review if they were published between 2013 and 2022, were published in English, and described psychosocial interventions, and/or pharmacological treatment of mental health conditions in cancer patients. **Results:** A total of 23 articles were reviewed. The articles were primarily located in, but not limited to, the United States. The general population across selected studies included middle-aged to older adult

individuals diagnosed with cancer. The prevalence of anxiety and depression was high among patients with cancer, especially in females and patients living in rural areas, and those with advanced stages of cancer, and/or undergoing chemotherapy. Medications studied in this population included clozapine (n = 1 study), tamoxifen (n = 1), psilocybin (n = 1), and ketamine (n = 1). Patients with psychiatric comorbidities are at a higher risk of hospitalization, advanced cancer at diagnosis, a worse prognosis and higher rate of relapse. However, patients often do not obtain psychological support/treatment due to stigma, lack of identification of psychiatric symptoms by the provider, inadequate social support and/or evidence around effective treatments, and insufficient patient preference. Psycho-oncology interventions, such as therapy and support groups, can improve the emotional care and support that patients need throughout their treatment journey. **Conclusions and Future Directions:** Integrating psychiatric pharmacotherapy and psychotherapy alongside cancer treatment can potentially improve health outcomes. Future studies should focus on pharmacological intervention methods tailored to the needs of cancer patients and utilization of patient-reported outcomes.

Historical Use of Phenobarbital for Alcohol Withdrawal Syndrome at an Academic Medical Center

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Type: Original Research. **Background:** Recently there has been a renewed interest in phenobarbital for alcohol withdrawal syndrome (AWS). Historically, our institution utilized phenobarbital for many years before standardizing care to benzodiazepines. Recent publications have cited much higher doses of phenobarbital than our institution previously used. **Purpose:** The purpose of this study is to characterize the historical use of phenobarbital for AWS on inpatient psychiatry. The primary objective is to capture phenobarbital dosing utilized in AWS. Secondary objectives include average and maximum dose in 24 hours, length of phenobarbital treatment, if symptoms improved, and if patients required transfer to a higher level of care. **Methods:** This retrospective medical record review included patients 18 years or older admitted to inpatient psychiatry between January 1, 2010 and December 31, 2014 who received phenobarbital for AWS. Dates were selected based on when phenobarbital was the primary agent used in AWS. Patients were excluded if they were pregnant, a prisoner, had a prescription for primidone, or had a history of epilepsy or were prescribed phenobarbital for epilepsy **Results:** One-hundred and eight records were reviewed, and 93 patients were included. The average patient was 45-years-old and predominately white males. Most patients (90.3%) were started on fixed dose phenobarbital, the most common fixed dose was 60 mg every 6 hours (n = 25, 29.8%). Forty-five (48.4%) patients received an as needed dose of phenobarbital with the most frequently used single dose being 30 mg (86.7%), followed by 60 mg (11%). The average total daily dose received was 233 mg, lowest was 30 mg and maximum was 510 mg. Average duration of phenobarbital treatment was 4.8 days, with the maximum of 12 days. The average length of stay was 6.4 days. The majority of patients (92.5%) were not transferred to medicine. Twenty-two (23.7%) did receive a benzodiazepine during their inpatient psychiatry admission. **Conclusion:** Phenobarbital was utilized on an inpatient psychiatry unit to manage AWS primarily as fixed dosing with taper. The renewed interest in its therapeutic use dictates further studies to determine its place in therapy and preferred dose, compared to the standard of care.

Impact of a Community Immersion Experience on Student Pharmacists' Associated Stigma of Serious Mental Illness

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Type: Original Research. **Background:** Mental health-related stigma is a barrier in accessing treatment and recovery for serious mental illnesses (SMI). Educational training programs have demonstrated positive changes in health professional students' attitudes and stigma related to SMI, but pharmacy students have minimal opportunity to engage with people with SMI throughout their academic experience. **Objectives:** To assess PharmD students' change in stigma related to SMI before and after participating in immersive workshop experiences with people with SMI. **Methods:** A series of five 2-hour workshops were provided to members of a local nonprofit organization serving people with SMI. Workshops provided information on a health and wellness topic and was led by 2-4 PharmD students. A 15-item survey was developed using the Opening Minds Scale for Healthcare Providers and administered to members of our collegiate chapter of AAPP. The same survey will be administered post-participation to those who led the workshops. Additionally, qualitative feedback will be assessed from participating students and members of the local nonprofit organization. **Results:** Complete pre-workshop surveys were obtained for 24 students. When presented statements about mental illness in others, a majority had positive attitudes and beliefs at baseline. All

respondents felt health providers need to advocate for people with mental illness. A proportion (7/24, 29.2%) indicated greater comfortability helping a person with a physical illness versus a person with mental illness. There was a greater degree of reluctance and hesitancy when presented statements about mental illness in themselves. Nine (37.5%) indicated they would be reluctant to seek help if they had a mental illness and five (20.8%) would see themselves as "weak". Results from the post-workshop survey will be obtained and included in the poster presentation at the 2023 annual meeting. **Conclusions and future directions:** Community immersion experiences allow PharmD students to interact with people with SMI at an earlier time point in their training. Future research into broad application of such experiences is needed to identify large-scale changes in pharmacy student perceived stigma.

Impact of Patient Support Programs on Clozapine Persistence and Cost: A Canadian Perspective

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Type: Original Research. **Objective**: Clozapine, which is the only treatment approved in Canada for treatment-resistant schizophrenia (TRS), is available as brand and generic formulations. Clozapine manufacturers are required to implement a patient support program (PSP) and to assure compliance with laboratory monitoring for agranulocytosis. Each manufacturer's program associated with their registry provides services and different levels of support to health-care professionals and their patients. The objective of this study was to estimate the economic impact of clozapine persistence on brand vs. generic clozapine, in Quebec, Canada. **Methods**: A persistence analysis of brand clozapine on CSAN® (brand clozapine's PSP) versus competing generic clozapine products (on other programs) was performed using IQVIA Canada's Régie de l'assurance maladie du Québec (RAMQ) data. Patients identified were followed for the subsequent 18 months. Costs considered were those associated with treatment acquisition, hospitalization, suicide attempts, emergency room and physician visits, and withdrawal symptoms. Costs were obtained from literature and Canadian governmental sources. **Results**: A total of 122 patients were identified. The 18-month persistence rate of patients on brand clozapine was 32.5% better than patients on generic clozapine, with the absolute percentages being 69.2% vs 55.4% ($P = .049$). The improved persistence on brand compared to generic clozapine translates into annual savings of $3,158 per patient, despite higher treatment acquisition costs on brand clozapine (+$2,097) and the longer retention. The main driver of this result is savings associated with reduced hospitalization (-$4,825). When applying these savings to the total Quebec TRS patient population on clozapine, this represents total savings of $25.6 million. **Conclusion:** The results support, that if one assumes two different formulations may have the same clinical benefits, the support programs associated with the manufacturer's registries and support systems have an impact on improving overall persistence on treatment.

Impact of Triptan and CGRP Receptor Antagonist Utilization on Plan Management for an Employer-Sponsored Health Plan for a Large Academic Medical Center

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Type: Original Research. **Background:** Calcitonin gene-related peptide (CGRP) receptor antagonists are used for acute and preventative treatment of migraines. They are currently available as branded products and are significantly more costly than older medications, such as triptans for acute treatment and antidepressants, antiepileptics, and beta-blockers for prevention. **Objective:** To review triptan and CGRP costs, utilization patterns, prior authorization (PA) approval rates, and implications for patient care and plan management. **Methods:** A retrospective analysis was conducted using triptan and CGRP claims and PA data (January 1, 2021 to April 30, 2022) from an employer-sponsored health plan for a large academic medical center. All data was provided by the plan's pharmacy benefit manager (Alluma). For each medication, total plan costs, utilization (number of 30-day claims), unique utilizers, and PA approval rates were determined. Data specific to rimegepant was further analyzed based on indication. **Results:** The analysis of the migraine category included 27,030 claims. For acute treatment, brand name medications contributed to 66.6% of plan cost and 5.2% of utilization. Drugs with the highest utilization included sumatriptan (45.9%) and rizatriptan (24.0%) tablets, which contributed to 3.4% and 2.2% of plan cost, respectively. Drugs contributing to the highest proportion of plan cost were rimegepant (32.6%) and ubrogepant (32.0%), with utilization rates of 2.3% and 2.2% respectively. For prevention, only brand name drugs were included in the analysis. Top utilized drugs were galcanezumab (55.4%), erenumab (24.7%), and fremanezumab (18.7%). These medications contributed to 56.7%, 23.8%, and 17.6% of plan cost, respectively. For CGRPs, the overall PA approval rate was 85.3%. For rimegepant, 95.2% of claims were for acute treatment and PA requests were denied more frequently for prevention (79.3%) compared to acute treatment (19.1%)

Conclusions: Use of PA requirements for CGRPs successfully maintained high utilization of less expensive triptans for acute treatment of migraines. Results were used by Alluma to consider changes to existing PA criteria and contracting opportunities for CGRPs.

Investigation of Changes in Naltrexone Long-Acting Injection Use Due to COVID-19 Pandemic

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Type: Original Research. **Purpose:** Investigate whether patients on long-acting injection (LAI) naltrexone for alcohol use disorder (AUD) a year before the COVID-19 pandemic continued the LAI, discontinued the LAI or switched to an oral medication for AUD during the first year of the COVID-19 pandemic. Determine if discontinuation of LAI naltrexone led to a difference in AUD outcomes (hospitalizations and emergency room visits) compared to veterans who remained on the LAI. **Methods:** This study included patients who received the LAI during the time period of February 1, 2019 through February 28, 2020 and then retrospectively reviewed during the initial year of the COVID-19 pandemic, March 1, 2020 through March 31, 2021 to determine the LAI status and AUD outcomes. Patient information will be collected through chart review using the Veteran's Affair Health System electronic medical record. Primary outcome was the difference in hospitalizations or emergency room visits related to AUD for patients discontinued off LAI versus those continued on LAI. Secondary outcomes included the percentage of patients who discontinued LAI due to COVID-19 and who restarted LAI. The differences in AUD outcomes based on reason for discontinuation or transition to another AUD medication compared to no medication were also assessed. **Results:** A total of forty-six patients were included in this analysis, nine continued LAI naltrexone while thirty-seven discontinued naltrexone during the first year of COVID-19 pandemic. Patients who discontinued the LAI had 9 hospitalizations and 1 emergency room visit, while those who continued the LAI had neither. The majority of patients (78.4%) discontinued the LAI for reasons unrelated to COVID-19 and had a higher percentage of hospitalizations (27.5% vs 12.5%) compared to those who discontinued due to COVID-19. Patients who switched to an alternative AUD medication had fewer negative outcomes than those who had no medication. **Conclusions:** Due to the limited number of patients who continued the LAI compared to those who discontinued the LAI in the first year of COVID-19, it is difficult to determine any definitive outcome differences. However, discontinuation of the medication did lead to increased hospitalizations and emergency room visits. It appears COVID-19 was not the driving factor that led to these outcomes.

Is Early Response the More Appropriate Outcome for Depression Studies?

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Type: Original Research. **Purpose:** Finding treatments for Major Depressive Disorder (MDD) in which depressive symptoms are relieved more promptly would greatly reduce patient distress. For more than 50 years clinical trials of antidepressants have assessed efficacy over 8 weeks. That standard remains what the FDA considers today. Past studies showed that signs of improvement in mood within two weeks indicate patients will respond to their antidepressant drug therapy. Since 2012, Kudlow (Can J Psych) has called for new antidepressant mechanisms and new clinical expectations to get patients better faster. What data exists that demonstrate rapid response is possible? **Methods:** We examined clinical trials of antidepressants with various mechanisms that utilized the MADRS (Montgomery-Asberg Depression Rating Scale) to evaluate changes in mood compared to placebo in patients with MDD. These antidepressants approved post-2012 included dextromethorphan-bupropion, esketamine, vortioxetine, brexpiprazole, and levomilnacipran. Mood changes were evaluated on a week-by-week basis, with the exception of esketamine. **Results:** Antidepressants on the market for some time such as levomilnacipran and vortioxetine showed separation from their placebo in regard to MADRS total score mean changes by week two. Levomilnacipran showed statistically significant MADRS total score mean changes by week 4, whereas vortioxetine showed statistically significant changes by week 2, with their clinical trials concluding in 6 weeks. Dextromethorphan-bupropion and brexpiprazole showed statistically significant changes by week 1 in their 6-week clinical trials. The clinical trial for dextromethorphan-bupropion evaluated MADRS total score mean changes from baseline. For brexpiprazole, the clinical trial used least mean change from baseline in MADRS scores. The 28-day clinical trial for esketamine found improvement in least square mean change in MADRS scores within 24 hours of the start of treatment and continued to be evaluated for four weeks after first exposure. **Conclusion and Future Directions:** The most recent antidepressant clinical trial findings suggest patients should be scheduled for reevaluation of improved mood symptoms earlier in therapeutic trials with the goal of minimizing patient discomfort and distress.

Knowledge of Pharmacists' Role in the Management of Opioid Use Disorder: Pharmacy Students' Perspective

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Type: Original Research. **Background and objective:** The opioid crisis is one of the most devastating public health crises that has been affecting the United States for the past three decades. The misuse and abuse of prescription and non-prescription opioid drugs can lead to addiction, overdose, and death. Thus, healthcare providers are essential in managing the treatment of patients with Opioid Use Disorders (OUD). Pharmacists are one of the most trusted and accessible providers of patient care and thus, it is critical to educate the next generations of pharmacists on OUD. The study's objective is to understand current pharmacy students' perspectives and knowledge on pharmacists' role in patient care and specifically OUD. **Design:** This research is an exploratory cross-sectional study conducted on April 4, 2022. **Methods:** Third-year pharmacy students enrolled in an accredited PharmD program (N = 113) anonymously responded to an online survey. Responses were analyzed through descriptive statistics. Pilot testing was also done to face-validate the survey. **Results:** The majority of the students agreed that pharmacists possessed the personal traits needed to treat patients with substance use disorder and the qualifications needed for general patient care (range for both: 93.8% to 99.1%). However, the percentage of agreement declined when it came to certain tasks that may be required to perform upon treating patients with OUD: performing drug testing (47.5%), performing urine pregnancy testing (56.6%), prescribing buprenorphine (47.8%), and assessing buprenorphine dose adjustments (82.3%). **Conclusion:** The findings show that pharmacy students have a positive outlook on the role of pharmacists in patient care. However, there is some uncertainty when it comes to assessments and understanding where pharmacists can contribute to therapy for patients with OUD. Further studies can assist in developing curriculums to increase knowledge on OUD and the potential roles and responsibilities when treating patients with OUD.

Long-term Retrospective Study of Weight Change in Cannabis Positive Outpatients with Schizophrenia or Bipolar 1 Disorder Receiving Treatment With Olanzapine/samidorphan Versus Olanzapine Alone

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Type: Original Research. **Background:** The prevalence of obesity and associated metabolic disorders in patients with schizophrenia or bipolar 1 disorder is approximately 60%. Recent research results estimate that up to 80% of this population use cannabis which may increase appetite thus contributing to weight gain. These comorbidities contribute to a 15-year reduction in life expectancy. **Method:** A repeated measures, mirror-image design with missing data addressed by LOCF (last observation carried forward) model was employed. Weight change over a 12-month period in cannabis positive patients with schizophrenia or bipolar 1 disorder taking olanzapine/samidorphan combination was examined. Those findings were compared to weight change in cannabis positive patients with schizophrenia or bipolar 1 disorder taking olanzapine only. Efficacy and durability of response were measured by change in weight and CGI. Safety and tolerability utilized reported adverse effects and variations found in metabolic parameters, craving (Yale Craving Scale) and tobacco use. The ANOVA, Kruskal- Wallis, and Wilcoxon-Signed rank test for significance were used to evaluate weight change and smoking status. **Results:** Fifty-five patients with DSM-5 diagnosis for schizophrenia-23 (42%) or bipolar 1 disorder-32 (58%) were evaluated. Patient demographics include: Age :41.14 ± 9.57 years, African American (9%), Hispanic (15%), Caucasian (76%), male (52%), smoker (78%). Metabolic effects include weight (kg) (pre- 86.4 ±25.20, post- 80.62 ±21.51, $P < .001$), BMI (pre- 29.38 ±6.89, post- 27.45 ±5.77, $P < .001$), (5.5%) gained > 7% from baseline($P < .05$), 30.9% lost >10 % from baseline($P < .05$), fasting glucose (pre- 88.17 ±7.63, post- 90.08 ±18.68, $P = .17$), HbA1c (pre- 5.09 ±0.23, post- 5.11±0.28, $P = .15$), total cholesterol (pre- 185.1 ±22.88, post- 176.32 ±-21.91, $P < .05$) and triglycerides (pre- 146.23±33.29, post- 132.71±30.59, $P < .001$). No significant change in CGI, no additional reported adverse events, significant reduction in smoking ($P < .05$) and carbohydrate craving (pre- 81.18 ±7.16, post- 40.46 ±6.59, $P < .001$). **Conclusion:** Sample size and study design limit our ability to make population inferences. However, the study provides evidence that olanzapine/samidorphan attenuates weight gain in cannabis positive outpatients currently treated with olanzapine alone for 12 months. Moreover, a statistically significant number of patients (30.9%) lost > 10% of body weight after 12 months of treatment with olanzapine/samidorphan with no reported adverse effects.

Methodology for Evaluating the REMS Programs for Psychiatric Medications

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Type: Original Research. **Background:** The Risk Evaluation and Mitigation Strategy (REMS) program helps "ensure the benefits of the medication outweigh its risks." However, the REMS have potential for unintended consequences impacting patient access, health professional workload/workflow, and patient safety. A study evaluated the impact of REMS program elements for clozapine, esketamine, and olanzapine pamoate on these aspects and provided recommendations for the REMS programs. **Objective:** Describe the methodology to evaluate the REMS programs and develop recommendations. **Research Methods/Approach:** The study elicited stakeholder perspectives on the Elements to Assure Safe Use (ETASU) for clozapine, esketamine, and olanzapine pamoate through focus group interviews (FGIs). A 5-member Steering Committee including an appointee from a national patient advocacy organization oversaw the project. The Steering Committee nominated members for a 12-member multidisciplinary Psychiatric Medication Working Group (PMWG) which consisted of healthcare professionals who identified areas of positive impact and how the impact could be improved for each REMS program. This information was used to develop Facilitators Guides for the FGIs. There were three FGIs, one for each medication, and FGI participants had recent experience working with the specific REMS program. The FGIs were audio-recorded and transcribed, from which analysis revealed emergent themes. These themes were used to create 12 overarching and nine medication-specific recommendations for the REMS program for clozapine, esketamine, and olanzapine pamoate. **Conclusion:** This methodology allowed for input from multidisciplinary stakeholders that varied in their involvement in mental health care. Some provided patient care while others advocated for care or were otherwise involved in mental healthcare policy. The approach allowed for diverse interpretation of the findings from the FGIs with the intent of developing recommendations intended to address patient safety, and patient access while health professional workload.

Newer Antiseizure Medications and Suicidality: Analysis of the Food and Drug Administration Adverse Event Reporting System (FAERS) Database

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Type: Original Research. **Purpose:** The aim of this study was to compare the safety profile of newer ASMs to older ASMs through an analysis of the United States FAERS database with a focus on suicidality. **Methods:** We queried over 17 million reports in the FAERS database from 2012 to 2021 and identified cases involving ASMs. After removing incomplete and duplicate reports, the study cohort consisted of lacosamide (n = 7593), perampanel (n = 1813), clobazam (n = 3827), brivaracetam (n = 1166) and vigabatrin (n = 5293) compared to a control group of older ASMs (n=71,535). Cases of suicidality (completed suicide, suicidal ideation, attempted suicide, suicidal behavior, suicidal depression) were identified in each group. Adjusted (age and gender) odds ratios (aOR) and associated 95% confidence intervals (CI) were calculated using logistic regression analysis for each new drug when compared to the control group of older ASMs. **Results:** A total of 6309 cases of suicidality were identified among reports with ASMs. Most reports were sourced from healthcare professionals (5516, 87.4%). The proportion of reports involving suicidality were 210/7593 (2.8%) for lacosamide, 185/1813 (10.2%) for perampanel, 108/3827 (2.8%) for clobazam, 57/1166 (4.9%) for brivaracetam, 14/5293 (0.3%) for vigabatrin, and 5735/71,535 (8.0%) for older ASMs. The gender (% female) and age (mean) of cases involving suicidality were lacosamide (53.8%, 42.3 years), perampanel (48.6%, 37.9 years), clobazam (63.9%, 37.4 years), brivaracetam (61.4%, 37.7 years), vigabatrin (71.4%, 34.2 years) and older ASMs (64.2%, 42.2 years). Compared with older ASMs, the aOR for suicidality was 0.33 (95% CI 0.28-0.38) for lacosamide, 1.34 (95% CI 1.15-1.56) for perampanel, 0.35 (95% CI 0.29-0.43) for clobazam, 0.60 (95% CI 0.45-0.77) for brivaracetam, and 0.03 (95% CI 0.02-0.05) for vigabatrin. **Conclusion:** When compared to older ASMs, four newer ASMs were found to have a significantly lower odds of suicidality while perampanel was found to have a significantly higher odds of suicidality. The results of this case control study of FDA adverse event reports spanning ten years and 6309 cases of suicidality, expand our understanding of the safety profile of newer ASMs.

Optimizing Antipsychotic Dosing Through a Pharmacy Driven Evidence-Based Titration Schedule: A Retrospective, Prospective, Quality-Improvement Study

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Type: Original Research. **Introduction:** There is limited data surrounding antipsychotic dose titration schedules toward therapeutic goal in relation to length of stay. Some antipsychotics can be titrated daily in the inpatient setting based on guideline driven titration schedules. The purpose of our study was to determine if guideline driven antipsychotic dosing titrations towards therapeutic goal would result in shorter length of stay. **Methods:** This study took place at one 100-bed acute-care inpatient psychiatric hospital. Patients were included if they were admitted to any

unit in the hospital, over the age of 18, and initiated on a scheduled antipsychotic. Patients who were pregnant or had the antipsychotic discontinued prior to discharge were excluded. Participants in the prospective group were reviewed daily by pharmacists and provider to determine if a dose titration was appropriate. The prospective group was compared to a retrospective group prior to the pharmacy driven initiative. Patients in the retrospective group included patients on an antipsychotic from February 14, 2022 through August 14, 2022. The prospective group included patients on an antipsychotic from August 15, 2022 through December 31, 2022. The primary outcome was difference in length of stay pre- and post-pharmacist intervention. A student *t*-test with 95% confidence intervals was used to determine the statistical significance. Secondary outcomes included number of readmissions during each study arm, and frequency of as needed antipsychotics and/or benzodiazepines during admission. **Results:** Length of stay was reduced from an average of 11 days in the retrospective group vs nine days in the prospective group ($P < .05$). There were 138 readmissions in the retrospective group vs 126 readmissions in the prospective group. In the retrospective group, 7099 antipsychotics and/or benzodiazepines (2266 antipsychotics) were administered for as needed use vs 3800 (1268 antipsychotics) administrations in the prospective group. An average of 7 vs 5 as needed medications per patient were administered during the retrospective and prospective group, respectively. **Conclusion:** By titrating medications via guideline driven titration schedules patients were discharged earlier by an average of 2 days. Use of as needed medications was also reduced when patient's scheduled antipsychotics were titrated faster toward therapeutic goals.

Patient-Experienced Stigma: Perceptions Regarding Obtaining Prescription Stimulant ADHD Medications

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Type: Original Research. **Background and Purpose:** The impact of stigma within mental health care has become much more widely understood. Research has shown that misperceptions and stigma are higher among adults with Attention-Deficit/Hyperactivity Disorder (ADHD) compared to children; however, the impact of stigma within this patient population is still highly under-investigated. Our study aims to identify perceptions and experiences of stigma among adults with ADHD actively seeking treatment. **Methods:** A sixteen-question survey was developed focusing on the ADHD diagnosis, medication acquisition, treatment process, and patient experience. Patients 18- to 79-years of age with a diagnosis of ADHD and actively receiving care from a psychiatric provider at a Federally Qualified Health Center in St. Louis, MO were eligible to participate. The survey was administered via phone or email between November 28, 2022 and December 16, 2022. SIUE Institutional Review Board (IRB) approved the data collection process. **Results:** Twenty-seven participants completed the survey, with 89% currently being prescribed a prescription stimulant for ADHD. Thirty-eight percent reported feeling hesitant to seek out prescription stimulant treatment due to perceptions on the validity of an adult ADHD diagnosis and 35% due to concerns about being labeled as having a substance use disorder. Thirty-two percent of respondents reported feeling judgment by the pharmacist when filling their stimulant prescription and eight individuals reported stopping their prescription stimulant completely because of the experience of stigma at some point during the course of their treatment. Forty-one percent have felt the need to change their prescribers in order to feel less affected by stigma. Top barriers identified in relation to obtaining prescription stimulant medications included medication not in stock at the pharmacy and prior authorization requirements. **Conclusions:** Patients with adult ADHD are at higher risk of experiencing stigma, specifically from within the healthcare system. It continues to remain a barrier toward seeking and maintaining stimulant medication treatment. Healthcare providers are encouraged to further explore the lived-experience of adults with ADHD to better understand and ultimately reduce stigmatizing behaviors that negatively impact patient access to quality, evidence-based care.

Pharmacist Reported Protocols for QTc Monitoring for Psychiatric Medications

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Type: Original Research. **Purpose:** Psychiatric medications, such as antipsychotics and antidepressants are associated with QTc prolongation. There is currently no consensus best practice on how to mitigate this risk. This study aimed to collect and analyze protocols for QTc monitoring in patients taking psychiatric medications to better understand current practice strategies. **Methods:** A voluntary Qualtrics survey was distributed on September 22, 2022 using the American Association of Psychiatric Pharmacists General Community email list to 740 subscribers. The survey closed on December 15, 2022. All survey responses were included in the analysis. Descriptive statistics were used to analyze multiple choice questions. Qualitative analysis applying grounded theory for thematic analysis was performed for the free response questions. **Results:** A total of 48 initiated

the survey, a 6.5% response rate. Of respondents, 11.4% (5/44) reported their institution had a formal protocol for monitoring QTc intervals in patients receiving psychiatric medications, while 32.4% (12/37) reported their institution had an informal protocol. The other respondents had neither a formal or informal protocol for their hospital, were unsure if their hospital had a protocol or had something other than a formal or informal protocol. Out of those with a protocol, approximately half reported it was drug specific. Additionally, 88.6% (31/35) of respondents reported there was a psychiatric clinical pharmacy specialist at their institution, and 34.3% (12/35) reported pharmacists could order an electrocardiogram (ECG). Major themes that emerged from the qualitative analysis included pharmacist driven QTc monitoring, referring the patient to another provider for monitoring, and encountering significant barriers to monitoring. **Conclusions and Future Directions:** Protocols are employed to limit QTc prolongation risk at some institutions. Pharmacist authorization to order ECGs may be an opportunity to advance consensus best practices to improve patient care for patients on psychiatric medications. Further research, with a larger sample size, is needed to more clearly decipher best practice on QTc prolongation risk mitigation in patients receiving psychiatric medications.

Pharmacotherapy for Pediatric and Adolescent Agitation in an Inpatient Behavioral Health Unit

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Type: Original Research. **Background:** Pro Re Nata (PRN) medications can be administered for the treatment of agitation. Evidence-based recommendations for the pharmacologic treatment of agitation in children and adolescents admitted to a behavioral health unit are limited; however, Best Practices in the Evaluation and Treatment of Agitation (BETA) recommends antipsychotics and/or benzodiazepines in managing agitation. The primary objective of this study was to evaluate the safety and efficacy of commonly administered PRN medications. The secondary objective was to analyze patterns for managing agitation in a pediatric and adolescent inpatient behavioral health unit. **Methods:** This retrospective chart review included patients who received a one-time or PRN medication for agitation while admitted to a pediatric and adolescent behavioral health unit from July 1, 2020 through June 31, 2022. Patients were excluded if they were pregnant during the encounter or received medications for indications other than agitation. Primary outcomes examined medication(s) administered, strength, administration route, concurrent medications administered, additional medications administered within 120 minutes, and use of restraints. Secondary outcomes included time between subsequent medications administered, order of medications administered, and safety outcomes. **Results:** A total of 192 patients were included in the final analysis. More than half (112, 58.3%) of patients were male. Most patients were White/Caucasian (103, 53.6%). Patients' age ranged from 6 to 18 years of age with an average of 14-years-old. The most common diagnostic-related groups for the admission included psychoses (50, 26%), major depressive disorders & other/unspecified psychoses (41, 21.4%), childhood behavioral disorders (35, 18.2%), and bipolar disorders (30, 15.6 %). A total of 1249 doses were administered during the study period. Most commonly administered medications were diphenhydramine (338, 25.8%), lorazepam (235, 17.9%), and olanzapine (225, 17.2%). Regarding therapeutic class, antipsychotics were administered most frequently (661, 52.9%). Antipsychotic-induced extrapyramidal symptoms (EPS) occurred in 3 patients (1.5%), with all instances managed with diphenhydramine. **Conclusions:** When treating agitation for pediatric and adolescent patients admitted to an inpatient behavioral health unit, antipsychotics were administered most frequently. It appears most doses were well-tolerated with the exception of antipsychotic-induced EPS in a small subset of patients.

Policies and Recommendation Frequencies for Medications for Opioid Use Disorder in Professional Recovery Programs in the US

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Type: Original Research. **Background:** The use of medications for opioid use disorder (MOUD) by health professionals in professional recovery programs (PRPs) is controversial. However, these debates rely on outdated publications and anecdotal reports. A recent scoping review of articles describing PRP policies related to MOUD found no objective data published since 2012. **Objectives:** The purpose of this study was to describe current policies and clinician recommendation frequencies for MOUD in PRPs. **Methods:** A survey was developed and pre-tested during two live interviews with PRP directors in Texas. The final survey focused on collecting data for each form of MOUD approved by the FDA : methadone (MTD), buprenorphine (BUP), and naltrexone (NTX). Data was collected in relation to participants in two scenarios: (1) not practicing, and (2) returning to practice. Email addresses and phone numbers were compiled for PRPs serving physicians, pharmacists, and nurses in all 50 US states. A unique survey link was emailed to each program, and a follow-up call was conducted within one week. Two reminder emails were sent to non-completers. **Results:** Complete responses

were obtained from 11/150 programs (response rate = 7.3%). For a participant who is not currently practicing, only one program reported an explicit prohibition for any medication – MTD. However, only one program reported MTD is recommended in more than 5% of cases. Nine programs reported neutral BUP policies and two reported it is discouraged, but one of the latter programs reported the highest recommendation frequency of 30%. Six programs reported NTX is encouraged and seven programs reported recommendation frequencies $\geq$ 40%. For a participant who is returning to practice, only one program reported an explicit prohibition for any medication – MTD, BUP, and NTX. Policy differences for this scenario compared to the prior scenario were minor and not consistently more or less permissive. **Conclusions:** This study provides the first objective data describing PRP policies regarding MOUD in over a decade. The findings support anecdotal reports that NTX is generally preferred and MTD and BUP use are rare even in the absence of explicit prohibitions. Future investigations would be strengthened by obtaining participant data.

Postictal Agitation After Electroconvulsive Therapy: Risk Factors and Treatment

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Type: Original Research. **Background:** Postictal agitation (PIA) after electroconvulsive therapy (ECT) can lead to patient and staff distress and is estimated to occur at an incidence of 5.4% to 12.5%. Although PIA can be unpredictable, several patient and treatment-related factors have been proposed as potential risk factors. Additionally, numerous medications have been utilized in the treatment of PIA, but there is limited information available to guide providers when selecting an agent. **Objective:** To investigate the occurrence of PIA in patients undergoing ECT, explore patient and treatment variables associated with PIA, and examine the agents used to treat PIA. **Methods:** A retrospective chart review was conducted for patients who received their initial ECT treatment between January 1, 2022, and June 30, 2022. Postictal agitation was identified by the administration of a sedative after ECT. Demographic, diagnostic, and ECT variables that could be associated with PIA were collected and accounted for in statistical analysis. **Results:** A total of 120 unique patients (1432 individual encounters) received at least one ECT treatment during the 6-month evaluation period. Of the 120 patients, 35.0% (n = 42) were treated for PIA during the 6-month period. Overall, those who were treated for PIA were more likely to be male, receiving outpatient therapy, and given etomidate as their anesthetic. Additionally, the proportion of patients receiving a unilateral treatment modality was higher in the group that developed PIA. In a subset of 53 patients who had their first ECT treatment during the 6-month review period, 39.6% (n = 21) were treated for PIA with the majority (85%) developing PIA within the first 6 ECT sessions. Admission status (outpatient), length of EEG seizure, and use of etomidate were associated with initial development of PIA. Most patients were treated with benzodiazepines, either alone (n = 17) or in combination with dexmedetomidine (n = 3), and n = 1 was treated with dexmedetomidine alone. **Conclusions:** Treatment of PIA appears to be more prevalent in this sample than what has been previously described in the literature, and often occurs early in treatment. Initial treatment most often consists of a benzodiazepine, and once initiated, is rarely discontinued.

Prevalence of Drugs of Abuse Usage in Veterans with ADHD treated with Stimulants Versus Non-Stimulants

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Type: Original Research. **Background:** Although stimulants are the first-line treatment of attention-deficit/hyperactivity disorder (ADHD) in adults, they have an increased potential for abuse and dependence. Abuse potential should be assessed before prescribing a stimulant and signs of dependence should be monitored during therapy. **Objective:** Urine drug screens (UDS) of veterans diagnosed with ADHD treated with stimulant medications were compared to veterans treated with non-stimulant medications with no documentation of prescription stimulant use. The purpose was to determine a possible correlation between stimulant use and illicit drug use. **Methods:** A report was generated of veterans with a diagnosis of ADHD and a current UDS defined as having resulted within the past 12 months. The list was divided into veterans managed on stimulant and non-stimulant ADHD pharmacotherapy. Chart reviews were used to analyze UDS for drugs of abuse. The most current UDS and UDS throughout the duration of therapy were analyzed and illicit substances were recorded. **Results:** Included in this study were 54 veterans treated with a stimulant and 25 veterans treated with a non-stimulant. Of veterans treated with stimulants, 20.4% had a positive screening on their most recent UDS for a substance other than amphetamines compared to 48% of veterans treated with a non-stimulant that had a positive screening for any substance on their most recent screen ($P = .01$). Of veterans treated with a stimulant, 27.8% had at least one positive UDS for a substance other than amphetamines compared to 56% of veterans treated with a non-stimulant with at least one positive screening for any substance during pharmaco-

therapy duration ($P = .001$). **Conclusion:** Veterans receiving stimulants for the management of ADHD had a decreased prevalence of positive UDS for drugs of abuse compared to veterans receiving non-stimulants for the treatment of ADHD. The findings from this study do not demonstrate a correlation between stimulant use and illicit drug use. However, veterans at higher risk for substance use disorder may be more likely to be prescribed non-stimulants. Future studies should exclude individuals with substance use disorders to correlate the prevalence of stimulant use and illicit drug use more linearly.

Safety and Effectiveness Outcomes of Conversion of Intravenous Ketamine or Intranasal Esketamine to Intramuscular Ketamine

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Type: Original Research. **Background:** Ketamine has been demonstrated to rapidly decrease depression severity in patients with major depressive disorder (MDD). We are unaware of any published studies that explore antidepressant effectiveness in conversions from intravenous ketamine (IVk) or intranasal esketamine (INk) to intramuscular ketamine (IMk). We evaluated the impact and safety of converting veterans from IVk or INk to IMk, with a focus on maintenance of antidepressant effect at our facility. **Methods:** We conducted a retrospective cohort study consisting of 62 veterans who received IVk (n = 26) or INk (n = 36) for treatment-resistant depression or severe suicidal ideation for at least 8 weeks and were converted and received at least 8 weeks of IMk between April 1, 2022 through October 31, 2022. Demographic and clinical information was extracted from our computerized medical records to describe sample characteristics at the start of IMk treatment including age, gender, race, and ICD-10 diagnoses. Patient Health Questionnaire-9 (PHQ-9) scores were recorded prior to each treatment with a ketamine analog. Changes in average PHQ-9 scores and use of any inpatient psychiatric admissions or urgent services (e.g., emergency department admissions or psychiatric emergency care admissions) during the 4 weeks prior to IMk conversion were compared to a 4-week period of IMk treatment. **Results:** Mean ± SD age at time of conversion to IMk was 49.5 ± 13.0 years. Majority were male (69%) and white (69%), and the most common DSM-5 diagnoses were depression (71%) or post-traumatic stress disorder (63%). 26 (42%) received IVk and 36 (58%) received INk prior to conversion to IMk. During the 4-week period prior to conversion to IMk, average PHQ-9 was 13.9 ± 5.8 and 3 patients (5%) had an inpatient psychiatric admission or urgent services for a psychiatric complaint. No significant differences in PHQ-9 scores or unscheduled admissions or urgent services were observed with treatment of IVk or INk compared to IMk for the entire sample. **Conclusion:** Conversion to IMk did not result in significant changes in antidepressant effectiveness. Additional studies of larger samples and for a longer period are warranted.

Safety of Deutetrabenazine Above Food and Drug Administration Maximum Recommended Dose in Huntington's Disease Chorea

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Type: Original Research. **Background:** Deutetrabenazine is a vesicular monoamine transporter-2 inhibitor approved by the Food and Drug Administration for the treatment of Huntington's Disease (HD) chorea with a maximum dose of 48 mg/day. The objective of this study was to describe outcomes in patients treated with deutetrabenazine doses above the currently approved maximum dose. **Methods:** A retrospective chart review was conducted at an academic medical center in an outpatient HD Society of America Center of Excellence clinic beginning April 1, 2017 to identify patients with HD chorea treated with deutetrabenazine doses above 48 mg/day. Exclusion criteria included concurrent use of strong CYP2D6 inhibitors and deceased or lost to follow-up status before study outcomes were evaluated (less than 6 months post-dose increase above 48 mg/day). Data was collected from deutetrabenazine initiation through July 1, 2022 or date of discontinuation, if applicable. Primary outcomes included reports of adverse events (AEs) within 6 weeks of dose increase, electrocardiogram (EKG) abnormalities, liver function tests (LFTs) elevations, and discontinuation of deutetrabenazine. Descriptive statistics were utilized for analysis. **Results:** We screened 32 patients and 15 were excluded (5 each: strong CYP2D6 inhibitor, deceased or lost to follow-up, prior use > 48 mg daily). Seventeen patients were included: 53% (n = 9) female, 100% (n = 17) white, and median age 55 [interquartile range (IQR) 48 – 66] years. The median dose of deutetrabenazine at study close was 54 mg/day (IQR 42 – 60 mg/day) with a maximum dose of 72 mg/day. Within 6 weeks of dose escalation, 18% (n = 3) of patients reported an AE. Overall, 11 patients reported 26 total AEs with akathisia (n = 5, 19%) and insomnia (n = 5, 19%) being most common; additionally, 4 patients required a dose change. Elevated LFTs and prolonged QT interval were seen in 20% (n = 2) of 10 patients monitored and in 18% (n = 2) of 11 patients monitored, respectively. Deutetrabenazine was

discontinued by 24% (n = 4) of patients due to deceased status (n = 2), lack of efficacy (n = 1), or formulation incompatibilities (n = 1). **Conclusions:** Deutetrabenazine doses above 48 mg/day appear to be safe in patients with HD chorea. Although adverse events were common, they resolved after dose change without requiring discontinuation of deutetrabenazine.

Subcutaneous Risperidone (TV-46000) Efficacy in Schizophrenia: A Phase 3, Randomized, Double-Blind, Relapse Prevention Study (RISE Study)

John M. Kane, MD[1-3]; Christoph U. Correll, MD[1-4]; Orna Tohami, MPH[5]; Roy Eshet, MD[5]; Avia Merenlender-Wagner, PhD[5]; Nir Sharon, MA[5]; Mark Suett, MD[6]; Kelli R. Franzenburg, PhD[7]; Glen L. Davis III, MS[8]; Eran Harary, MD[5]

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Type: Original Research. **Background:** The RIsperidone Subcutaneous Extended-release study (RISE; NCT03503318) assessed the efficacy and safety of TV-46000, a long-acting subcutaneous antipsychotic (LASCA), once monthly (q1m) and once every 2 months (q2m) compared with placebo in patients with schizophrenia after stabilization on oral risperidone. **Objective:** To evaluate the efficacy of TV-46000 q1m or q2m in patients with schizophrenia. **Methods:** The primary endpoint was time to impending relapse. Patient-reported outcomes included Schizophrenia Quality of Life Scale (SQLS), Personal and Social Performance Scale (PSP), 5-Level EuroQoL 5-Dimensions Questionnaire (EQ-5D-5L), and Drug Attitudes Inventory 10-item version (DAI-10). Psychopathological symptom severity and improvement were evaluated using the Positive and Negative Syndrome Scale (PANSS), Clinical Global Impression-Severity (CGI-S), and CGI-Improvement (CGI-I). Post hoc analyses by injection site (upper arm, abdomen) were performed for time to impending relapse. **Results:** Altogether, 863 patients were enrolled and 544 randomized: TV-46000 q1m (n = 183), TV-46000 q2m (n = 179), and placebo (n = 181). Time to impending relapse significantly favored TV-46000 (hazard ratio [95% CI], TV-46000 q1m: 0.200 [0.109, 0.367]; q2m: 0.375 [0.227, 0.618]; $P < .001$ for both); TV-46000 (q1m and q2m) prolonged time to relapse by 5.0 and 2.7 times, respectively, versus placebo. The SQLS least squares mean (LSM) changes (SE) demonstrated improvement from randomization to end of treatment (EoT) for TV-46000 (q1m: −5.40 [1.12]; q2m: −4.54 [1.16]) but worsened for placebo (1.14 [1.32]). The PSP, EQ 5D-5L, and DAI-10 showed similar trends. Greater global illness improvement (CGI-I) was observed from randomization to EoT for TV-46000 (LSM [SE], q1m: 3.30 [0.08]; q2m: 3.15 [0.08]) versus placebo (3.85 [0.10]). For time to impending relapse, interaction between treatment and injection site was not significant ($P = 0.998$), suggesting no difference between arm and abdomen for TV-46000 q1m (arm: hazard ratio versus placebo [95% CI], 0.183 [0.040–0.834]; abdomen: 0.194 [0.099–0.379]) and TV-46000 q2m (0.375 [0.128–1.102]; 0.378 [0.215–0.664]). In addition, the benefit–risk profile of TV-46000 was favorable and consistent with approved oral and long-acting injectable risperidone formulations. **Conclusions:** Treatment with TV-46000 significantly prolonged time to impending relapse, numerically improved quality of life, attitudes towards treatment, and psychopathological symptoms, and was similarly effective in both injection sites.

Subcutaneous Risperidone (TV-46000) Safety and Tolerability in Schizophrenia: A Phase 3, Randomized, Double-Blind, Relapse Prevention Study (RISE Study)

John M. Kane, MD[1-3]; Christoph U. Correll, MD[1-4]; Orna Tohami, MPH[5]; Roy Eshet, MD[5]; Helena Knebel, MD[6]; Avia Merenlender-Wagner, PhD[5]; Nir Sharon, MA[5]; Mark Suett, MD[7]; Kelli R. Franzenburg, PhD[8]; Glen L. Davis III, MS[9]; Eran Harary, MD[5]

[1] The Zucker Hillside Hospital, Northwell Health, Glen Oaks, NY; [2] Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Hempstead, NY; [3] Feinstein Institutes for Medical Research, Institute of Behavioral Science, Manhasset, NY; [4] Charité–Universitätsmedizin Berlin, Department of Child and Adolescent Psychiatry, Berlin, Germany; [5] Teva Pharmaceutical Industries, Innovative Medicines, Global Clinical Development, Netanya, Israel; [6] Teva Pharmaceutical Industries Ltd, Global Patient Safety and Pharmacovigilance, Tel Aviv, Israel; [7] Teva UK Limited, Global Medical Affairs, Harlow, United Kingdom; [8] Teva Branded Pharmaceutical Products R&D, Inc, Global Medical Affairs, West Chester, PA; [9] Teva Branded Pharmaceutical Products R&D, Inc, Global Clinical Operations, West Chester, PA

Type: Original Research. **Background:** TV-46000 is a long-acting subcutaneous antipsychotic (LASCA) combining risperidone and innovative copolymer-based drug delivery technology. The RIsperidone Subcutaneous Extended-release study (RISE; NCT03503318) compared the efficacy and safety of TV-46000 once monthly (q1m) or once every 2 months (q2m) with placebo in patients with schizophrenia. **Objective:** To evaluate the safety and tolerability of TV-46000 q1m or q2m in patients with schizophrenia. **Methods:** Safety and tolerability assessments included adverse events (AEs), laboratory tests, vital signs, electrocardiograms, physical examinations, and safety measurements of interest (suicidality, depression, abnormal movements). Post hoc analyses of AEs by injection site (upper arm, abdomen) were also performed. **Results:** Of 544 patients randomized, 542 comprised the safety population

(TV-46000 q1m, n = 183, patient years [PY] = 147.0; TV-46000 q2m, n = 180, PY = 145.1; placebo, n = 179, PY = 106.1). Most frequently reported treatment-related AEs (≥ 5% of patients and with higher frequency in either TV-46000 group) were injection site nodule (q1m, n = 12 [7%]; q2m, 13 [7%]; placebo, 6 [3%]), weight increased (7 [4%]; 10 [6%]; 4 [2%]), and extrapyramidal disorder (9 [5%]; 6 [3%]; 0). Serious AEs (>1 patient in either TV-46000 group) were suicidal ideation (q1m, 2 [1%]; q2m, 0; placebo, 1 [<1%]) and schizophrenia (0; 2 [1%]; 4 [2%]). Event rates/100 PY were lower for both TV-46000 groups compared with placebo. No deaths (n = 5) were related to treatment. Twenty-one (11%) patients treated with TV-46000 q1m, 14 (8%) with TV-46000 q2m, and 10 (6%) with placebo discontinued treatment because of AEs. There were no clinically meaningful changes related to vital signs, cardiac function, laboratory variables (except for prolactin), suicidality, depression, or abnormal movements. Injection site AEs (pain, nodule, induration, and pruritus) were lower for arm vs abdomen injection sites for TV-46000 q1m (12% vs 26%) and q2m (14% vs 26%), without differences for placebo (12% vs 12%). None of the injection site reactions were serious, and few (≤ 4 patients in either TV-46000 group) injection site AEs led to treatment discontinuation. Time to impending relapse (efficacy) results favored study drug for both TV-46000 q1m and q2m vs placebo. **Conclusions:** The benefit–risk profile of TV-46000 is favorable and consistent with approved oral and long-acting injectable risperidone formulations.

Time-to-Therapy Discontinuation in Patients Newly Diagnosed With Schizophrenia Initiated on Long-Acting Injectable Versus Oral Dopamine Receptor Blocking Agents

Shaina Schwartz, PharmD, BCPP[1,2]; Sun Lee, PharmD[1]; Erin Baily Coble, PharmD[1]; Colton Troxler, PharmD[1]; Samantha Pizzurro, PharmD[1]; Archana Kumar, MD[2].

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Type: Original Research. **Purpose:** The purpose of this project is to assess the time-to-therapy discontinuation and hospital readmission rate among patients newly diagnosed with schizophrenia who are prescribed long-acting injectable versus oral dopamine receptor blocking agents. **Methods:** A retrospective review of medical records was performed for adult patients admitted to an 80-bed inpatient behavioral health facility from October 1, 2015 to February 6, 2020 with a new diagnosis of schizophrenia. The primary outcome studied was time to therapy discontinuation within 1 year of discharge, while secondary outcomes assessed were time-to-therapy discontinuation within 90 days and readmission rate at 30 days, six 6 months, and 1 year. Multivariate Cox proportional hazard and linear regression modeling were used for statistical analysis. **Results:** A total of 425 patients were included in the analysis, with 66.4% (n = 282) discharged on oral and 33.6% (n = 143) on long-acting injectable dopamine receptor blocking agents. At 1-year post-discharge, the rates of discontinuation were 49.7% for those prescribed long-acting injectable and 55.7% for those prescribed oral formulations (adjusted hazard ratio = 0.54, $P = .012$). There was no statistically significant difference in readmission rate between the patients prescribed long-acting injectable and oral dopamine receptor blocking agents at any timepoint tested. **Conclusions and Future Directions:** The use of long-acting injectable dopamine receptor blocking agents was associated with longer time-to-discontinuation compared to oral agents when prescribed to patients newly diagnosed with schizophrenia in the inpatient setting. However, this was not associated with significant reductions in rehospitalization, calling into question the clinical impact. Future studies will seek to confirm these findings using a prospective study design.

Trazodone Versus Doxepin as a Pharmacologic Sleep Aid in Psychiatric Inpatients: A Retrospective Cohort Study

Kevin Chen, PharmD candidate 2023[1]; Megan Maroney, PharmD, BCPP[1,2]

[1] Ernest Mario School of Pharmacy, Rutgers, the State University of New Jersey, Piscataway, NJ; [2] Monmouth Medical Center, Long Branch, NJ

Type: Original Research. **Purpose:** Patients admitted to inpatient psychiatric units frequently experience secondary insomnia. Trazodone and doxepin are non-habit-forming options often utilized in this setting to help patients sleep. At our institution, trazodone 50 mg is the suggested initial treatment for insomnia in the admission order set. If a patient does not respond to 50 mg initially, physicians will often increase the dose to 100 mg or switch to an alternative treatment, such as doxepin. The objective of this study was to determine if doxepin is an effective alternative to trazodone 100 mg after the patient has failed treatment with trazodone 50 mg. **Methods:** This retrospective cohort study included voluntary adult inpatients admitted to an academic medical center between July 1, 2020 and July 1, 2022 who received trazodone 100 mg or doxepin 25 mg (the most commonly utilized dose for insomnia at this institution) after failing treatment with trazodone 50 mg for insomnia. The primary endpoint was treatment failure, signified by a change in insomnia medication (either dose change or change to an alternative medication). Secondary endpoints included subjective sleep quality, subjective total sleep time (TST), and estimates of objective TST, time to sleep onset, and wakefulness after sleep onset (WASO). **Results:** A total of 122 patients were included in the analysis. Medication

change was needed in 35.2% of trazodone patients and 41.2% of doxepin patients ($P = .576$). The percent of days with subjectively good sleep was similar between groups (trazodone: 0.66, doxepin: 0.63; 95% confidence interval [CI] of difference, -0.20 to 0.12). Secondary endpoints that trended toward favoring doxepin included subjective TST, estimated objective TST, estimated time to sleep onset, and estimated WASO. Adverse effects leading to discontinuation occurred in 1 patient in the trazodone group and 3 patients in the doxepin group ($P = .633$). **Conclusions and Future Directions:** After treatment failure with trazodone 50 mg, there was no statistically significant difference between trazodone 100 mg and doxepin 25 mg, but most parameters trended in favor of doxepin. Further research is necessary to determine if there is a statistically significant difference between the two groups.

Use of Prazosin, an Alpha-1 Adrenergic Blocker, in Children with PTSD-Associated Nightmares

Sydney Macuray, PharmD candidate of 2023[1]; Megan Maroney, PharmD, BCPP[1,2]

[1] *Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ;* [2] *Department of Pharmacy, Monmouth Medical Center, Long Branch, NJ*

Type: Original Research. **Purpose:** Post traumatic stress disorder (PTSD)-associated nightmares are thought to be associated with elevated CNS adrenergic activity during sleep. Prazosin, an alpha-1 adrenergic blocker, should theoretically reduce adrenergic activity and therefore PTSD-associated nightmares. While prazosin has been studied extensively in adults for this purpose, there is limited pediatric data available. This retrospective chart review aims to understand the safety and efficacy of prazosin for this indication in the pediatric population. **Methods:** Patients admitted to the pediatric psychiatry unit between August 1, 2019, and July 31, 2021, with a PTSD diagnosis who received at least one dose of prazosin for PTSD-related nightmares were included. Exclusion criteria included concomitant trazodone or cyproheptadine use. Primary efficacy outcome was any change in nightmare frequency or intensity as determined by prescriber and nursing progress notes and medication administration records. Secondary outcomes included general sleep quality improvement recorded in the progress notes, blood pressure changes, and incidence of adverse effects. Outcomes were analyzed and reported using basic descriptive statistics. **Results:** This study included 19 female patients with a mean age of 15.32 years. Seven patients (36.8%) had used prazosin previously for PTSD-associated nightmares. Eleven patients (57.9%) reported a decrease in nightmares with prazosin and one patient (5.3%) reported a worsening in nightmares after a dose decrease. Two patients (10.5%) reported no nightmare frequency change, and 5 patients' (26%) progress notes did not discuss nightmare frequency. Most patients (n = 10, 52.6%) reported no adverse effects, and 8 patients' (42.1%) progress notes had no mention of adverse effects. Adverse effects reported included low blood pressure symptoms (n = 2, 10.5%), dizziness (n = 1, 5.3%), pain (n = 1, 5.3%), and insomnia (n = 1, 5.3%). Mean blood pressure decreased from 120.1/73.8 at baseline to 101.3/63.3 the morning after the first dose of prazosin. Eleven patients (57.9%) had a significant blood pressure drop (systolic $\geq$ 20 mm Hg and/or diastolic $\geq$ 10 mm Hg) and one patient experienced significant hypotension (90/48) without symptoms. **Conclusions and Future Directions:** Prazosin use in pediatric patients was associated with a decrease in PTSD-associated nightmare frequency with minimal adverse effects.

Utilization and Appropriateness of Single Dose Injectable Aripiprazole Lauroxil in the Treatment of Schizophrenia

Michaelyn Moretz; Joshua Caballero, PharmD, BCPP, FCCP; Jianing Xu, MS; Daniel B. Hall, PhD; Xianyan Chen, PhD; Henry N. Young, PhD

University of Georgia, Athens, GA

Type: Original Research. **Objectives:** Single-dose injectable aripiprazole lauroxil (SDIAL) is used with long-acting injectable (LAI) aripiprazole lauroxil in the treatment of schizophrenia. SDIAL can be used to either (1) initiate treatment or (2) supplement during maintenance when follow-up doses of LAI aripiprazole lauroxil are not given within labeled recommendations (eg, monthly intervals). The primary objective was to determine utilization and appropriateness of SDIAL between initiation and maintenance supplementation use. Secondary objective was to determine overall inappropriate use and associated costs. **Methods:** International Classification of Diseases, 10th edition codes were used to identify adult patients with schizophrenia and related disorders (18 to 64 years) who received SDIAL and/or LAI aripiprazole lauroxil between January 1, 2016 and December 30, 2020 using MarketScan Medicaid® databases. Package insert labeling timelines determined the appropriateness of SDIAL on both treatment initiation (ie, 10-day timeframe) and maintenance supplementation (ie, 6- to 12-week timeframe). Additionally, miscellaneous inappropriateness was identified as SDIAL given as a single dose or used outside 90 days of LAI aripiprazole lauroxil. Two authors independently reviewed each SDIAL claim to determine appropriateness. Descriptive statistics were used to analyze the data. **Results:** After excluding potential billing errors, 582 claims were identified for SDIAL. Of these, 459 (79%) SDIAL claims were appropriate (458 during initiation; 1 during maintenance). On the contrary, 123 (21%) SDIAL claims were potentially inappropriate (47 during initiation; 47 during

maintenance; 29 miscellaneous). The overall potential inappropriate use resulted in costs over $290,000. **Conclusion:** Given the preliminary results, it appears greater education should be provided to prescribers on the appropriate use of SDIAL, especially for supplementation during maintenance treatment. This should allow for cost savings, lowering the risk of unnecessary side effects, and potentially improving adherence. Limitations include how the potentially inappropriate use of SDIAL affects adherence; thus, further analysis (e.g., discontinuation rates) is needed.

Encore Presentation Abstracts

A Pharmacodynamic Study Comparing in Nalmefene to in Naloxone in Healthy Volunteers

Mark Ellison, PhD; James Fratantonio, PharmD; Emily Hutton; Phil Skolnick, PhD, DSc (hon.)
Opiant Pharmaceuticals, Santa Monica, CA

Type: Encore Presentation. **Previously Presented:** ASAM 2023. Under review, if accepted will be presented April 13th -16th

Assessment of an Integrated Psychiatric Pharmacy Practice Within a Rural Internal Medicine Clinic

Bennett Doughty, PharmD, BCPS, BCPP[1,2]; Anna Fink, PharmD Candidate[1]; Breanna Sellaouti, BS, PharmD Candidate[1]; Jenna Stasko, BS, PharmD Candidate[1]; Hanna Surdi, BS, PharmD Candidate[1]; Sheela Prabhu, MD[2]
[1] Binghamton University School of Pharmacy and Pharmaceutical Sciences, Binghamton, NY; [2] Guthrie Robert Packer Hospital, Sayre, PA

Type: Encore Presentation. **Previously Presented:** Accepted for Publication in Journal of the American Pharmacists Association

Centering Rural Veterans' Experiences of SUD Care From Clinical Pharmacy Practitioners in VA: Patient Voices as an Implementation Metric

Tera Moore, PharmD, BCACP[1]; Veldana Alliu, PharmD, BCPS[1]; Tony Pomales, PhD[2]; Heather Ourth, PharmD, BCPS, BCGP, FASHP[1]; Megan McCullough, PhD[3,4]
[1] Department of Veterans Affairs - Pharmacy Benefits Management Clinical Pharmacy Practice Office, Washington,; [2] Veterans Rural Health Resource Center - Center for Access & Delivery Research and Evaluation (CADRE), Iowa City VA Health Care System, US Department of Veterans Affairs, Iowa City, IA; [3] Center for Healthcare Organization and Implementation Research (CHOIR), Bedford VA Health Care System, US Department of Veterans Affairs, Bedford MA; [4] University of Massachusetts, Lowell, MA

Type: Encore Presentation. **Previously Presented:** December 2022, 15th Annual Conference on the Science of Dissemination and Implementation Meeting, hosted by NIH and Academy Health

Changes in Metabolic Parameters Associated with Lumateperone in Late-Phase Clinical Trials for the Treatment of Major Depressive Episodes Associated with Bipolar I or Bipolar II Disorder

Bradford Loo, PharmD[1]; Suresh Durgam, MD[1]; Susan G Kozauer, MD[1]; Jason Huo, PhD[1]; Robert E Davis, PhD[1]; Sharon Mates, PhD[1]; Christoph U Correll, MD[2-4]
[1] Intra-Cellular Therapies, Inc, New York, NY; [2] The Zucker Hillside Hospital, Glen Oaks, NY; [3] Zucker School of Medicine at Hofstra/Northwell, Hempstead, NY; [4] Charité Universitätsmedizin Berlin, Berlin, Germany

Type: Encore Presentation. **Previously Presented:** ACNP Annual Meeting; December 4-7, 2022

Characterization of Viloxazine's Serotonergic Effects at Doses Relevant for ADHD Treatment

Jennie Garcia-Olivares[1]; Brittney Yegla[1]; Jami Earnest[1]; Vlad Maletic[2,3]; Chungping Yu[1]; Jonathan Rubin[1]
[1] Supernus Pharmaceuticals, Inc Rockville, MD; [2] University of South Carolina School of Medicine, Greenville, SC; [3] Duke University, Durham, NC

Type: Encore Presentation. **Previously Presented:** ACNP 2022

Clinical Pharmacy Impact in Mental Health Intensive Case Management

Jessica Bovio Franck, PharmD, BCPS; Karrie Squires, PharmD, BCPP
North Florida/South Georgia Veterans Health System, Gainesville, FL

Type: Encore Presentation. **Previously Presented:** 2021 ACCP Virtual Poster Symposium (May 25-26, 2021)

Crushing Valbenazine Capsule Contents for Potential Addition to Soft Foods or Administration Via G Tube

Mello Hebert; Alexander Mar; Samantha Cicero; Richard Moore; Ali Bristow; Scott Siegert
Neurocrine Biosciences, Inc, San Diego, CA

Type: Encore Presentation. **Previously Presented:** AMCP 2023

Effects of a Psychiatric PharmD Rotation on Mental Health Knowledge and Attitudes Towards the Provision of Pharmaceutical Care To People With Mental Illness

Monica Zolezzi, PhD[1]; Rawan Ghanem, PharmD[1]; Yassin Eltorki[2]

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Type: Encore Presentation. **Previously Presented:** 49th European Society of Clinical Pharmacy Virtual Symposium,19-21 October 2021.

Efficacy and Safety Comparison of Weekly/Monthly Extended-Release Injectable Buprenorphine (CAM2038) Versus Daily Sublingual Buprenorphine/Naloxone (BPN/NX) for Treatment of Patients with OUD Who Inject Opioids or Use Heroin

Natalie Budilovsky-Kelley, PharmD[1]; Michelle Lofwall, MD, DFAPA, DFASAM[2]; Ned Nunes, MD[3,4]; Genie Bailey, MD, DABAM[5,6]; Sharon Walsh, PhD[2]; Michael Frost, MD, FACP, DFASAM[7]

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Type: Encore Presentation. **Previously Presented:** ISAM Annual Meeting November 3-6, 2018, Busan, South Korea

Efficacy and Safety of Zuranolone in Adults With Major Depressive Disorder With and Without Use of Standard-Of-Care Antidepressants at Baseline in the LANDSCAPE Clinical Development Program

Anita H Clayton, MD[1]; Robert Lasser, MD[2]; Youssef Toubouti, MSc[2]; Colville Brown, MD[2]; Simon Kyaga, MD, PhD[3]; Mona Kotecha, MD[3]; Fiona Forrestal, MSc[3]; James Doherty, PhD[3]; Andrew J. Cutler, MD[4]

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Type: Encore Presentation. **Previously Presented:** PSYCH 2022, Sep 17-20, 2022

Evaluation of Antipsychotic Monitoring in a Community Health Center during the COVID-19 Pandemic

Kaylie LeMere; Jesse Madore; Richard Silvia, PharmD, BCPP

Massachusetts College of Pharmacy and Health Sciences, Boston, MA

Type: Encore Presentation. **Previously Presented:** 2022 ACCP Global Conference

Improvements in Cognitive and Physical Functioning Outcomes in Depressed Patients Treated with AXS-05 (Dextromethorphan-Bupropion): Results From the EVOLVE Open-Label, Long-Term Study

Amanda Jones[1]; Maurizio Fava[2]; Zachariah Thomas[1]; Caroline Streicher[1]; Shawn Alter[1]; Herriot Tabuteau[1]

[1] Axsome Therapeutics, New York, NY; [2] Massachusetts General Hospital, Boston, MA

Type: Encore Presentation. **Previously Presented:** ACNP 2022, December 4-7

Interim Analysis of Efficacy During Long-Term Treatment With Viloxazine Extended-Release Capsules in Children and Adolescents With Attention-Deficit/Hyperactivity Disorder: An Open-Label Extension Study

Jami Earnest, PharmD; Joseph Hull, PhD; Zulane Maldonado-Cruz, MD; Tesfaye Liranso, PhD; Peibing Qin, PhD; Christian Teter, PharmD; Jonathan Rubin, MD

Supernus Pharmaceuticals, Inc, Rockville, MD

Type: Encore Presentation. **Previously Presented:** US Psych Congress 2022

Long-Term Efficacy of TTreatment With Viloxazine Extended-Release Capsules in Adults With Attention-Deficit/Hyperactivity Disorder: Results from an Open-Label Extension Study

Andrea Formella, PharmD; Joseph T. Hull, PhD; Zulane Maldonado-Cruz, MD; Tesfaye Liranso, PhD; Peibing Qin, PhD; Jonathan Rubin, MD

Supernus Pharmaceuticals, Inc, Rockville, MD

Type: Encore Presentation. **Previously Presented:** American Professional Society of ADHD and Related Disorders Conference, January 12-15, 2023

Long-Term Lumateperone Treatment in Bipolar Disorder: Six-Month Open-label Extension Study

Mauricio Tohen, MD, PhD, MBA[1]; Micah Lands, PharmD[2]; Susan G Kozauer, MD[2]; Changzheng Chen, PhD[2]; Suresh Durgam, MD[2]

[1] University of New Mexico Health Sciences Center, Albuquerque, NM; [2] Intra-Cellular Therapies, Inc, New York, NY

Type: Encore Presentation. **Previously Presented:** ASCP Annual Meeting; May 31-June 3, 2022; Psych Congress Annual Meeting; September 17-20, 2022; ECNP Annual Congress; October 15-18, 2022; NEI Congress; November 3-6, 2022

Long-Term Safety and Symptom Trajectory With Aripiprazole Lauroxil in Female Patients With Schizophrenia: A Post Hoc Subgroup Analysis

Deanna L. Kelly, PharmD, BCPP[1]; Sergey Yagoda, MD[2]; James McGrory, PhD[2]

[1] Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, MD; [2] Alkermes, Inc, Waltham, MA

Type: Encore Presentation. **Previously Presented:** Psych 2022, September 17–20, 2022; NEI November 3–8, 2022

Lumateperone in the Treatment of Major Depressive Episodes Associated With Bipolar I or Bipolar II Disorder: Evaluation of Extrapyramidal and Motor Symptoms in Late-Phase Clinical Trials

Margaret Martin, PharmD[1]; Suresh Durgam, MD[1]; Susan G Kozauer, MD[1]; Changzheng Chen, PhD[1]; John M Kane, MD[2-4]

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Type: Encore Presentation. **Previously Presented:** ACNP Annual Meeting; December 4-7, 2022

Medical Cannabis in the Treatment of Parkinson's Disease

Traci S. Aladeen, PharmD, BCPP[1,2]; Anna G. Mattle, PharmD, MS[1,2]; Kory Zelen, PharmD[2]; Moustafa Mesha[1]; Michelle M. Rainka, PharmD, BCPP, CCRP[1,2]; Tanya Geist, R-PAC[1]; Bennett Myers, MD[1]; Laszlo Mechtler, MD, FAAN, FEAN, FASN, FAHS[1]

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Type: Encore Presentation. **Previously Presented:** 2019 AAN Annual Meeting; 2019 ACCP Annual Meeting

Naloxone Co-Prescribing Practices for High-Risk Patients in an Academic Medical Center Family Medicine Clinic

Hanna Azimi, PharmD[1,2]; Kaitlyn Haas, PharmD Candidate[1]; Mary Carpenter Andrews, PharmD, BCACP[2]

[1] The University of Georgia, College of Pharmacy, Athens, GA; [2] Augusta University Medical Center, Augusta, GA

Type: Encore Presentation. **Previously Presented:** Vizient Pharmacy Network Meeting, December 3, 2022, Las Vegas, NV

Rapid Antidepressant Effects of Zuranolone in Patients With Major Depressive Disorder and Postpartum Depression: Overview of the LANDSCAPE and NEST Clinical Development Programs

Anita H Clayton, MD[1]; Kristina M Deligiannidis, MD[2]; Theresa Vera, PhD[3]; Youssef Toubouti, MSc[3]; Mona Kotecha, MD[4]; Bridgette Leclair, PharmD[4]; Mark Pollack, MD[3]; James Doherty, PhD[3]

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Type: Encore Presentation. **Previously Presented:** ACNP 2022, Dec 4-7, 2022

Real World Impact of Patients With Bipolar Disorder or Schizophrenia who Experience High Frequency of Agitation Episodes

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Type: Encore Presentation. **Previously Presented:** AMCP March 2023

Real-World Adherence to Deutetrabenazine or Valbenazine Among Patients With Tardive Dyskinesia

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Type: Encore Presentation. **Previously Presented:** NEI Congress; November 2–6, 2021; AMCP Nexus; October 11–14, 2022

Real-World Effectiveness and Safety of Deutetrabenazine in Combination With Antipsychotic Drugs in Patients With Chorea Associated With Huntington Disease

Daniel Claassen, MD[1]; Hela Romdhani, PhD[2]; Rajeev Ayyagari, PhD[2]; Debbie Goldschmidt, PhD[2]; Sarah Zoye Moroz, MPH[3]; Adreanna Hernandez, BA[1]; Nayla Chaijale, PhD[4]; Sam Leo, PharmD[5]

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Type: Encore Presentation. **Previously Presented:** AAN April 22–28, 2023

Real-World Insights Into Long-Acting Injectable Antipsychotic Agent (LAI) Initiation in the Inpatient Setting and Transition/Continuation-Of-Care: Impact of LAI Characteristics on Outcomes Among Patients With Schizophrenia

Stephen Thompson, MS[1]; Rashmi Patel, MD[2,3]; Christian Liman, MSc[2]; Mayowa Oyesanya, MD[2]; Sheryl Ker, BSc[2]; Aishwarya Jayaraman, MS[2]; Kelli R. Franzenburg, PhD[4]; Rolf Hansen, PhD[5]; Mike Philbin, PharmD, MBA, MSc[6]

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Type: Encore Presentation. **Previously Presented:** Psych 2022, NEI 2022

Review of the TAAR1 Agonist Ulotaront: Part I - from Discovery to Clinic

Seth C. Hopkins, PhD; Nina Dedic, PhD; Courtney Zeni, PhD; Colleen Synan, PhD; Kenneth S. Koblan, PhD

Sunovion Pharmaceuticals Inc, Marlborough, MA

Type: Encore Presentation. **Previously Presented:** CINP 2022, ECNP 2022, Psych Congress 2022, NEI 2022

Review of the TAAR1 Agonist Ulotaront: Part II - Summary of Initial Clinical Efficacy/Safety Results

Seth C. Hopkins, PhD; Heather Dworak, PhD; Courtney Zeni, PhD; Kenneth S. Koblan, PhD.

Sunovion Pharmaceuticals Inc, Marlborough, MA

Type: Encore Presentation. **Previously Presented:** CINP 2022, Psych Congress 2022, ECNP 2022, NEI 2022

Safety and Efficacy of KarXT (Xanomeline–Trospium) in Schizophrenia in the Phase 3, Randomized, Double-Blind, Placebo-Controlled EMERGENT-2 Trial

Christoph U. Correll[1-3]; Andrew C. Miller[4]; Sharon Sawchak[4]; Inder Kaul[4]; Steven M. Paul[4]; Stephen K. Brannan[4]

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Type: Encore Presentation. **Previously Presented:** Pysch 2022, ECNP 2022, AMCP Nexus 2022, ACNP 2022, NPA 2023, ISPN 2023, AMCP 2023

Sublingual Dexmedetomidine for the Treatment of Acute Agitation Associated with Schizophrenia or Bipolar Disorder: Effect Size and Pooled Efficacy

Heather Robison, MPP; Lavanya Rajachandran, PhD; Brittany Poisson, PharmD, BCPP; Robert Risinger, MD

BioXcel Therapeutics, Inc, New Haven, CT

Type: Encore Presentation. **Previously Presented:** ACLP 2022

Sustained Treatment Response With Long-Term Valbenazine in Patients With Tardive Dyskinesia

Christoph U. Correll[1-3]; Jean-Pierre Lindenmayer[4-5]; Khody Farahmand[6]; Eric Jen[6]; Scott Siegert[6]; Eduardo Dunayevich[6]

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Type: Encore Presentation. **Previously Presented:** Psych Congress 2022

Utilization of Medication for Opioid Use Disorder in Opioid Treatment Programs

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Type: Encore Presentation. **Previously Presented:** AMCP 2023, San Antonio, TX

Validation of an Algorithm for the Assessment, Management and Monitoring of Drug-induced QTc Prolongation in the Psychiatric Population

Monica Zolezzi, PhD[1]; Athar Elhakim, PharmD[2]; Oraib Abdallah, PharmD[3]; Yassin Eltorki, MSc Pharm[3]; Waad Elamin, PharmD candidate[1]; Shorouk Homs, BScPharm[1]; Doaa Mahmoud, MSc candidate[1]; Iman Qubaiah, PharmD[1]

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Type: Encore Presentation. **Previously Presented:** 49th ESCP Virtual Symposium,19-21 October 2021

Work in Progress Abstracts

Absolute Neutrophil Count Monitoring in Clozapine Patients with a Point of Care Fingerstick Device: A Quality Improvement Research Project

Mark Chinen, PharmD; Mark Mierzwa, PharmD, BCPP; Lehua Kay, PharmD, BCPP

Department of Pharmacy, Hawaii State Hospital and PharMerica, Kaneohe, HI

Type: Work in Progress. **Background:** Antipsychotic medications are the standard treatment for schizophrenia. Clozapine remains the only antipsychotic approved for treatment-resistant schizophrenia (TRS). Guidelines support the use of clozapine due to its higher rates of treatment response and reductions in psychotic symptoms, all-cause mortality, overall hospitalization rates, suicide risk, and treatment discontinuation due to lack of efficacy. In addition to other side effects including constipation, weight gain, cardiomyopathy, and sialorrhea, clozapine also requires frequent blood absolute neutrophil count (ANC) monitoring in accordance with its risk evaluation and mitigation strategy (REMS) program due to risk of neutropenia. This requirement for blood draws is the most significant barrier to clozapine treatment. Although venous blood draws for ANC monitoring are the standard of care, point of care testing (POCT) options for clozapine have become available. Hawaii State Hospital (HSH) will begin offering patients capillary testing for clozapine ANC monitoring using an FDA approved device which measures ANC and white blood cells (WBC) through a single fingerstick. Literature around similar devices has shown a statistically significant difference in patient and practitioner preference for capillary sampling. **Objectives:** (1) Compare patient subjective experience between ANC testing methods. (2) Evaluate provider, nursing, and patient preference for ANC testing method. **Methods:** HSH prescribers will have the option to order the capillary blood ANC tests starting in 2023. All patients on clozapine will be eligible except those who are on an iron chelating agent or less than 21 years of age. The subjective experience of each patient will be measured by a visual analogue scale (VAS) immediately after each blood sampling during the study period. At the end of the study period, physicians, nurses, and patients will be asked which method was preferred and if the method had any influence on their motivation to continue clozapine treatment. A quality control check will be done by comparing a venous blood draw with the first capillary blood draw. **Outcomes:** We will report the mean values of the rating scales and evaluate if there is a significant difference between testing methods.

Acting on the AUDIT-C: Implementation of Direct-to-Consumer Education on Unhealthy Alcohol Use

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Type: Work in Progress. **Background:** More than 140,000 deaths are attributed to excessive alcohol consumption annually. The Alcohol Use Disorder Identification Test (AUDIT-C) is a brief screening instrument. On a 0–12-point scale, scores of 4 to 7 indicate unhealthy alcohol use is present, and greater than 7 indicates alcohol use disorder is present. The Screening, Brief Intervention, and Referral to Treatment (SBIRT) model has demonstrated efficacy in educating and connecting patients to care, but funding requirements pose challenges to sustainability. Academic detailing services have implemented direct-to-consumer education for other high-risk behaviors, such as benzodiazepine use, with improved outcomes. This indicates direct-to-

consumer education may be implemented for unhealthy alcohol use in a sustainable manner. **Objectives:** (1) Evaluate alcohol use via AUDIT-C for patient who received direct-to-consumer education (intervention) compared to a matched cohort that did not receive direct-to-consumer education. (2) Evaluate engagement with substance abuse treatment program (SATP), mental health (MH) pharmacotherapy, psychology, or other MH visit following intervention. (3) Evaluate initiation of medications for alcohol use disorder (MAUD) after intervention. **Methods:** Data for this project was collected through retrospective chart review. A list of patients at Central Virginia Healthcare System with a positive AUDIT-C score of 4 to 7 within the previous year and an upcoming PCP or MH appointment from April 26, 2002 to June 17, 2022 was accessed and direct-to-consumer information was mailed to patients. Patients with absolute contraindications to MAUD will be excluded, defined as severe renal and hepatic impairment. Chart review will include updated AUDIT-C score, referral to MH or SATP, and initiation of a MAUD. Additionally, the same data from a matched cohort with AUDIT-C score of 4 to 7 from 6 months prior to the above intervention and who did not receive direct-to-consumer education for AUD will be collected for analysis as a control group. Data will be analyzed and evaluated for trends, including AUDIT-C score, engagement with SATP services, and initiation of MAUD. **Outcomes:** We will report the impact of direct-to-consumer patient education on AUDIT-C score, engagement with MH or SATP, and initiation of MAUD for patients who received direct-to-consumer education compared to patients who did not.

Analysis of Impact of COVID-19 Regulations on Mental Health Trends and Prescribing Patterns in an Institutionalized, Older Adult Population

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Type: Work in Progress. **Background:** To ensure patient safety throughout the coronavirus disease of 2019 (COVID-19) pandemic, institutions implemented strict regulations for visitation and socialization. This institution's community living center underwent lock-down on May 17, 2020, which prohibited family visitation, separated residents based on hall assignment, and limited social activities to prevent infective spread. While these efforts were justified to prevent mortality directly from COVID-19 infection, evidence is conflicting on whether the mental health of older adults has been negatively impacted. **Objectives:** (1) Describe prevalence of new-onset anxiety or depression. (2) Measure frequency of depression and suicide screenings performed on inpatient veterans. (3) Assess medication changes related to mental health worsening. (4) Measure utilization of mirtazapine for depression in relation to COVID-19 food regulations. **Methods:** A retrospective chart review was performed on 98 patients living in the institution's community living center between September 1, 2022 and October 1, 2022. Data on disease states, medications, and notable behaviors was collected in the time period prior to lock-down occurring on May 17, 2020, then compared to its respective data in the time period after lock-down. Mental health worsening was defined as new diagnoses of anxiety or depression, initiation of medications for anxiety, depression, or agitation, and changes in dose or administration frequency of mental health medication regimens. Prescribing patterns were analyzed with specific focus on the utilization of mirtazapine for depression with concurrent weight loss or lack of appetite in relation to COVID-19 food regulations. **Outcomes:** Baseline demographics will be reported to give an accurate description of the population. Results will include the number of veterans who received a new diagnosis of anxiety or depression, the number of veterans who completed depression or suicide screenings, and the number of medication changes that occurred during the specified timeframe. Medication changes will be described in context of dose changes, initiations, and number of veterans who received mirtazapine.

Analysis of Psychiatric Pharmacist Telephone Outreach Interventions Using the Veterans Affairs National Academic Detailing Services Alcohol Use Disorder Dashboard

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Type: Work in Progress. **Background:** Alcohol consumption is one of the leading preventable causes of death in the United States. The number and rate of alcohol related deaths increased approximately 25% between 2019 and 2020. Alcohol use is a modifiable risk factor for many medical and mental health conditions. One of the major treatment barriers is that many who consume alcohol do not meet the official criteria for alcohol use disorder (AUD) but may still have unhealthy alcohol consumption. The VA National Academic Detailing Services AUD Dashboard was developed to help detect those who have reported unhealthy alcohol use based off recent Alcohol Use Disorder Identification Test - Consumption (AUDIT-C) scores. Interdisciplinary healthcare team members are able to utilize this data to identify patients who may benefit from outreach to discuss their alcohol consumption, provide brief interventions, and offer treatment options. **Objectives:** (1) Evaluate successful interventions completed by psychiatric pharmacists via telephone outreach to patients with a positive AUDIT-C screening as identified by the VA AUD Dashboard. (2) Further characterize interventions resulting

from dashboard identification. **Methods:** This is an IRB exempt, multicenter, observational, retrospective, cohort study that will be conducted at 2 separate VA facilities. Patients will be identified for inclusion based on attempted outreach intervention as documented by psychiatric pharmacists in the AUD Dashboard. Data will be collected via electronic chart review and dashboard analysis. Patients will be included if they were selected by a pharmacist for attempted telephone outreach interventions between May 1, 2022 and December 31, 2022. Interventions will be categorized as follows: intervention completed, intervention in progress, intervention indicated, intervention not indicated, and intervention unsuccessful. A successful intervention will be defined as the following: brief intervention completed, AUDIT-C performed, pharmacotherapy for alcohol use initiated, referral to substance use disorder specialty care, linkage to alcohol detoxification services, or referral to general mental health care. **Outcomes:** We will report the percentage of successful interventions completed by psychiatric pharmacists via outreach to patients with a positive AUDIT-C screening as identified by the AUD Dashboard within 60 days of initial pharmacist contact. We will then further characterize interventions resulting from dashboard identification.

Anticholinergic Ordering for Extrapyramidal Symptom (EPS) Prophylaxis and Incidence of EPS in Patients Treated with Antipsychotics

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Type: Work in Progress. **Background:** Current schizophrenia treatment guidelines and medical literature provide vague recommendations regarding indications for anticholinergics for extrapyramidal symptom (EPS) prophylaxis in patients treated with antipsychotics. Some guidelines recommend avoiding anticholinergics for EPS prophylaxis or to consider use of these agents on a case-by-case basis for patients treated with first-generation antipsychotics (FGA). Anticholinergics have side effects that can be intolerable for patients, such as dry mouth, constipation, and tachycardia. Long-term use of anticholinergics can increase the risk of cognitive impairment and worsen tardive dyskinesia. However, EPS is commonly reported as a reason for antipsychotic non-adherence, so some providers may opt to utilize anticholinergic prophylaxis. **Objectives:** (1) Determine prevalence of anticholinergic orders for EPS prophylaxis for patients treated with antipsychotics on inpatient psychiatric units. (2) Determine the incidence of EPS in patients with and without prophylaxis. (3) Provide recommendations regarding EPS prophylaxis to standardize practice across the health system based on results. **Methods:** We will conduct a randomized, retrospective chart review of patients admitted to inpatient psychiatric units across a five-hospital health system from November 1, 2021 to October 30, 2022 with orders for scheduled oral or long-acting injectable antipsychotics. Data collected will include demographics, antipsychotic medication, scheduled anticholinergic, occurrence of new onset EPS, and relevant comorbidities. Patients who received as-needed or one-time doses of short-acting injectable or oral antipsychotics will be excluded. A target sample size of 200 patients will be selected for review. Discrete terms will be defined to systematically evaluate charts for the presence of EPS to determine EPS incidence. **Outcomes:** We will describe identified correlations between use of anticholinergics and incidence of EPS across the health system. Subgroup analyses may be conducted by age, sex, race, diagnosis, antipsychotic type, and known history of EPS. Results will be used to make system-wide recommendations for ordering anticholinergics for EPS prophylaxis.

Assessing the Appropriateness of Antipsychotic Prescribing Practices in Patients With Dementia in an Inpatient Community Living Center

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Type: Work in Progress. **Background:** Dementia is commonly associated with hallucination, psychosis, or neuropsychiatric symptoms. Atypical neuroleptics, or antipsychotics, have been the standard of care for managing psychotics symptoms and agitation in dementia. However, antipsychotics are not approved for the treatment of behavioral and psychological symptoms of dementia (BPSD) by the FDA and may increase mortality. Yet, there are times when benefit of use may outweigh the risk regarding patient and caregiver safety, and quality of life for treatment of these symptoms. These medications should be used cautiously, when non-pharmacological strategies have failed, due to their adverse effect profile and potential for increased mortality. Thus, treatment should be maintained only if benefits are apparent. Discontinuation of antipsychotics should also be attempted at regular intervals while weighing the risk of relapse versus the risk of adverse effects from continuing treatment. Given the potential for undesirable adverse drug events, this study will assess the appropriateness of antipsychotics in patients with dementia on the inpatient community living center (CLC) at a Veteran Affairs Hospital. **Objectives:** Analyze antipsychotic

prescribing patterns and (1) determine if antipsychotics in patients with dementia are appropriate and (2) evaluate interventions to de-prescribe antipsychotics in patients with dementia. **Methods:** This retrospective chart review will include patients with dementia on the inpatient CLC units at a Veterans Affairs Hospital (VHA) between January 1, 2021 and January 1, 2022. Collected data will include baseline demographic data (age, sex, comorbid psychiatric diagnoses), neurological or psychiatric assessments (Mini-Mental State Examination, Brief Psychiatric Rating Scale, Abnormal Involuntary Movement Scale, history of neuroleptic malignant syndrome), monitoring of antipsychotics (weight, lipids, hemoglobin A1C) and dose reductions and/or discontinuation attempts related to de-prescribing efforts. Supplemental information such as documented behavioral/psychotic relapses and hospitalizations will be reported. Student *t* test and descriptive statistics will be used to analyze collected data where applicable. **Outcomes:** Collected data will be analyzed to determine the appropriateness of current prescribing patterns and interventions made to de-prescribe antipsychotics in patients with dementia. Results will highlight current efforts and guide future areas for improvement within an inpatient CLC.

Assessing the Efficacy of Battlefield Acupuncture for Reducing Pain Scores in Veterans Prescribed Opioid Therapy

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Type: Work in Progress. **Background:** Battlefield Acupuncture (BFA) is a form of auricular acupuncture that is emerging as a nonpharmacologic, adjunctive strategy for treating pain. Benefits associated with BFA include it being easily teachable, administrable, low-cost, and a well-tolerated intervention. Previous literature has demonstrated efficacy with pain relief after BFA treatment, including more than 75% of veterans experiencing immediate reductions in pain. However, there is limited literature regarding the impact of BFA on opioid therapy utilization or in patients with mental health comorbidities. **Objectives:** (1) To determine if BFA is associated with a reduction in opioid therapy use. (2) To determine how effective BFA is at reducing pain scores in veterans prescribed opioid therapy for chronic pain. (3) To determine the optimal frequency BFA should be recommended to provide pain relief. (4) To assess the safety and tolerability of BFA. (5) To assess if BFA is more effective in reducing pain in veterans with mental health comorbidities. **Methods:** This single center, retrospective chart review will be conducted through the use of the VA electronic health record and will include data from January 1, 2017 to August 31, 2022. veterans will be included in analysis if they have completed more than one BFA session, have a documented BFA encounter in their chart which includes pre- and post-BFA pain scores, and were prescribed concurrent opioid therapy for chronic pain. Collected data will include demographics, type of chronic pain that BFA was utilized for, reported change in pain score with BFA, number of BFA sessions received and at what frequency, medication regimens, and diagnoses. **Outcomes:** For the first primary outcome, we will report changes in opioid therapy use as the resulting difference in the average daily morphine milligram equivalents one year before and one year after starting BFA treatment. For additional primary outcomes, we will report the average change in pain scores achieved with BFA, average frequency of BFA administration, and most frequently reported complications. As for our secondary analysis, we will compare the average change in pain scores for subjects within our sample that have a mental health comorbidity to those who do not.

Assessing the Impact of Culture and Stigma on the Utilization of Mental Health Resources Amongst Health Professions

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Type: Work in Progress. **Background:** Stigmatizing attitudes towards individuals with mental illnesses persist amongst society, the continuum of healthcare, and higher education. Those on the front lines of clinical care are exposed to challenges that jeopardize their mental health, which is neglected as these individuals often prioritize providing optimal patient care at the expense of their well-being. Further evaluation of the stigma toward mental illness in the health profession has revealed barriers to mental health care amongst the Hispanic/Latinx community, resulting in this population to face disparities in treatment access. Clinical knowledge is the sole focus in professional schooling, leaving students to experience mental distress from their profession without learning emotional coping strategies. It is important to assess the stigma that exists within health profession institutions and address common difficulties experienced by these students. **Objectives:** (1) Identify barriers preventing the utilization of counseling services provided for students in health profession programs at our institution. (2) Build supportive collaboration within our institution's professional schools. (3) Address barriers identified within our institution and provide continuing education sessions teaching evidenced-based strategies on coping with mental distress and handling burnout. **Methods:** This study will analyze and act on the results of an electronic survey that will be sent out to all students within health profession programs at our institution. The survey will assess demographic information, utilization and barriers to care of current counseling

services, brief psychiatric history whilst in professional school, and preferences on targeted mental health initiatives. Descriptive statistics will be performed to identify common barriers to mental health care within the professional schools and the specific needs of our professional student population. **Outcomes:** Percent utilization of provided counseling services by health profession students and identified barriers to care will be reported. Race and ethnicity will be considered to assess any discrepancies amongst the Hispanic/Latinx population with reference to mental health care. Our findings will be used to provide continuing education sessions that focus on how to cope with mental distress. Feedback will be collected following these sessions to gauge student interest and to improve the quality of content provided.

Assessment of Buprenorphine Prescribing Practices Overtime

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[1] Boise VA Medical Center; [2] VISN 20 Pharmacy Benefits Management at US Department of Veterans Affairs

Type: Work in Progress. **Background:** Evidence-based treatment for opioid use disorder (OUD) includes buprenorphine, which has demonstrated efficacy to decrease opioid related harms including overdose and mortality. Despite efforts to increase OUD treatment rates among veterans, treatment remains underutilized among some VA facilities. Currently, the Boise VA Medical Center is prescribing buprenorphine and other prescriptions for OUD at a lower rate than the national VA average (42.8% vs 46.3%, FY 2022, Quarter 4). Targeted efforts have been implemented to improve prescribing of buprenorphine at the Boise VA, such as initiation of Medication-Assisted Treatment (MAT) clinics in January 2019; however, despite a suggested increase in overall buprenorphine prescribing at the Boise VA based on national trends, it is unclear if eligible providers are utilizing prescribing privileges. **Objectives:** To assess the rate of buprenorphine prescribing practices at the Boise VA. This assessment will include rates of prescribing before and after implementation of MAT clinic for diagnosis of OUD and identify the prevalence of buprenorphine prescribing among DEA X-waivered providers. **Methods:** This IRB-exempt retrospective medication use evaluation will assess prescribing from June 1, 2018 until October 31, 2022. Providers will be included if they have a DEA X-waiver and have prescribed at least one prescription for buprenorphine for the diagnosis of OUD. The following buprenorphine products will be included: buprenorphine-naloxone sublingual (SL) tablets/films, buprenorphine ER suspension, subcutaneous injection, and buprenorphine SL. Clinic name will be used to identify location of services provided. Data collection will be completed using SQL and compared to VA metric dashboard trend reports. Data analysis will be conducted using descriptive statistics with application of a χ^2 test to assess outcomes between clinic locations. Trends for prescribing of buprenorphine over time will be displayed graphically. **Outcomes:** The primary outcome includes rate of buprenorphine prescribing over time for patients with OUD/opioid dependence. Secondary outcomes include the following: number of monthly prescriptions from MAT clinic versus mental health specialty clinics and primary care, prevalence of DEA X-waivered prescribers per practice setting, and prevalence of DEA X-waivered prescribers who utilize their waiver as noted by prescribing at least one or more buprenorphine outpatient prescriptions.

Assessment of Naloxone Prescribing Patterns Before and After the Introduction of South Carolina Law Requiring Naloxone to be Offered to Patients at Increased Risk of Opioid Overdose

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MUSC Health, Charleston, SC

Type: Work in Progress. **Background:** On July 25, 2021, South Carolina (SC) Bill 571 went into effect which requires prescribers to offer naloxone to patients if they are (1) prescribed $\geq$ 50 oral morphine milligram equivalents (MME) daily, (2) prescribed an opioid and benzodiazepine, or (3) have an increased risk of overdose. In response to this bill, the study institution initiated a "best practice alert" (BPA) on July 28, 2021, that alerts providers when naloxone should be offered. Increased naloxone access is associated with decreases in opioid-related deaths. It is important to understand if state laws and associated BPAs are effective in increasing naloxone prescribing. **Objectives:** (1) Determine whether naloxone prescribing has increased after the implementation of SC Bill 571. (2) Assess the effectiveness of the BPA including number of naloxone prescriptions associated with the BPA, reasons prescribers select not to prescribe naloxone within the BPA, and at-risk populations not identified by the BPA. **Methods:** This retrospective chart review included all adult patients hospitalized or seen in the outpatient setting at the study location. The primary objective was defined as the difference in the number of naloxone prescriptions before the implementation of the BPA, from July 28, 2020 through July 27, 2021, and the number of naloxone prescriptions after, from July 28, 2021 through July 28, 2022. Secondary outcomes were assessed from March 1, 2022 through March 31, 2022. Patients were included in the secondary outcomes if they met one or more of the following criteria: $\geq$ 50 MME/day of opioids prescribed, concurrent opioid and benzodiazepine prescrip-

tion, inpatient order for Clinical Opiate Withdrawal Scale, positive urine drug screen for methadone, items on problem list associated with opioid use/dependence/overdose, or if the BPA was triggered during their visit. **Results:** The number of naloxone prescriptions increased from 1010 prior to BPA implementation, to 12,242 prescriptions after BPA implementation. Secondary outcome results will be available by April 2023. **Conclusions:** There was an increase in naloxone prescribing following the implementation of a state law and institutional BPA prompting naloxone to be offered to patients at risk for opioid overdose.

Augmentation With Antipsychotics in Child and Adolescent Patients With Major Depressive Disorder: A Retrospective Analysis of Prescribing Patterns

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Type: Work in Progress. **Background:** Depression in children and adolescents is a growing concern in the United States with suicide as a leading cause of death in people aged 10 to 24 years. The antidepressants fluoxetine and escitalopram are the only two medications approved for the treatment of MDD in children and adolescents. In adults, some antipsychotics are approved as augmentation agents with antidepressants for the treatment of MDD. However, there is limited research on the use of antipsychotic augmentation in children and adolescents. Clinically, a rise in youths being prescribed antipsychotics as augmentation for MDD has been observed. Antipsychotics are not benign agents and youths may be more susceptible to metabolic and extrapyramidal adverse effects. **Objectives:** The objectives of this study are to determine the frequency of prescribing antipsychotics for MDD in child and adolescent patients and what factors influence the addition of an antipsychotic for these patients. **Methods:** This study is a retrospective chart review evaluating antipsychotic prescribing for MDD in hospitalized patients 4 to 17 years old. Patients are included if admitted between June 1, 2018 and May 31, 2021, diagnosed with MDD, and are not on an antidepressant or antipsychotic prior to admission. Patients are excluded if they have any of the following diagnoses: MDD with psychotic features, bipolar disorder, schizophrenia, schizoaffective disorder, or autism spectrum disorder. Patients are divided into groups based on initiation of an antipsychotic. Binomial logistic regression will be used to analyze variables with prescribed antipsychotics as the dependent variable. **Outcomes:** The primary outcome is the frequency of the prescribing of antipsychotics for MDD in child and adolescent patients. Secondary outcomes include factors influencing antipsychotics for child and adolescent patients with MDD, psychotropic medications prescribed, and optimization of antidepressants. Patients will be followed through 1 year of admissions. We will report demographics and baseline characteristics of patients who received scheduled antipsychotics for MDD and compare to the control group that did not. The frequency of antipsychotic prescribing as well as common psychotropic prescribing patterns for both groups will be reported.

Buprenorphine Initiation: Is Opioid Withdrawal Necessary?

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Type: Work in Progress. **Background:** Buprenorphine is a safe and lifestyle-friendly opioid use disorder (OUD) treatment and it is imperative that barriers to its use are minimized or eliminated. Low dose buprenorphine initiation (LDBI) is a more compassionate approach compared to standard initiation which requires opioid abstinence and/or withdrawal. LDBI introduces buprenorphine in smaller doses with simultaneous overlap with full opioid agonist treatment including methadone. This emerging strategy eliminates the withdrawal requirement and offers an opportunity to increase access to treatment with buprenorphine by making it more palatable for patients. **Objectives:** (1) Evaluate the appropriateness of buprenorphine buccal film indication and dosing for hospitalized and Ambulatory Addiction Medicine patients. (2) Identify trends with buprenorphine buccal film by service and linkage to care outcomes. (3) Determine if the use of buprenorphine buccal film minimized the risk of withdrawal symptoms. **Methods:** A retrospective chart review will be performed for patients who received LDBI from January 1, 2022 to Dec 31, 2022 using the Addiction Medicine Consult data collection spreadsheet. Inclusion criteria include hospitalized and ambulatory addiction medicine patients that have received at least one dose of buprenorphine buccal film or LDBI with buprenorphine film. Exclusion criteria include individuals less than 18 years of age. Data collection will include demographics (race, age, and gender), department/service origin, primary and secondary substance use disorder, indication for micro-induction/LDBI, type of full opioid agonist (street opioid, methadone, methadone + street opioid use, prescribed opioids), buprenorphine product used, methadone dose, success onto treatment dose of buprenorphine/naloxone, adverse effects, linkage to care, discharge against medical advice (AMA), and deviation from approved micro-induction/LDBI protocol. Descriptive analysis will be used to summarize the results of the data collection. **Outcomes:** We will report baseline demographic

characteristics, the success of the transition to treatment dose of buprenorphine/naloxone from LDBI, adverse effects, discharge AMA status, and linkage to care outcomes. Emergency department/inpatient hospitalization and ambulatory addiction medicine will be reported separately.

Cardiovascular Safety of Amphetamine/Dextroamphetamine Versus Methylphenidate in Older Adults

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Type: Work in Progress. **Purpose:** To determine if the incidence of serious cardiovascular events is different in patients taking amphetamine/dextroamphetamine compared with methylphenidate. **Background:** Stimulants are considered first line in the treatment of ADHD and their use in off-label indications including stroke rehabilitation, traumatic brain injury, depression augmentation, and more is increasing. Recent epidemiological data has shown a sharp increase in stimulant use among the older adult population. Stimulants effect the heart through increasing release and blocking reuptake of norepinephrine. Chronic action of norepinephrine increases cardiac workload and predisposes to hypertension, endothelial dysfunction, left ventricular hypertrophy, and episodes of arrhythmia. Older adults are especially vulnerable to these effects and recent data has shown an increase in cardiovascular events in older adults using stimulants. However, little data exists comparing cardiovascular safety of these agents. **Methods:** Retrospective chart review of veterans 50 years and older at the VA North Texas Health Care System who initiated a new-start stimulant prescription between 2015 and 2021. The incidence of cardiovascular events will be collected and compared between veterans taking amphetamine/dextroamphetamine and methylphenidate. The primary outcome is the difference between composite endpoint of cardiovascular events (myocardial infarction, stroke, arrhythmia, sudden cardiac death) between amphetamine/dextroamphetamine and methylphenidate. Secondary endpoints are each cardiovascular endpoint compared individually. Chi-square test will be used to compare comorbidities and other patient factors between the two groups. Relative risk will be used to calculate difference in cardiovascular events (composite and individual). **Results:** There were 466 veterans screened for inclusion, 13 were excluded, and 454 met inclusion criteria. There were 245 veterans in the amphetamine/dextroamphetamine group and 209 in the methylphenidate group. Of the 245 veterans in the amphetamine/dextroamphetamine group, there were 12 cardiovascular events and of the 209 patients in the methylphenidate group there were 8 events. Primary and secondary statistical results pending. **Conclusion:** In progress.

Clinical and Financial Outcomes of a Pharmacist Medication Management Program in an Outpatient Neurologic and Psychiatric Health Care Center

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Type: Work in Progress. **Background:** Pharmacist medication therapy management (MTM) services have been shown to improve medication adherence, reduce hospitalizations and readmissions, improve medication appropriateness, and reduce drug-related problems. Unfortunately, there are several barriers to the provision of MTM services by community pharmacists, including lack of time with patients, lack of patient knowledge on MTM availability, lack of pharmacy space, and lack of interprofessional relationships. Clinical pharmacists embedded within an outpatient health care center are well-suited to provide MTM services to patients. In addition, pharmacists with specialty training can offer additional expertise when optimizing care in patients with complex neurologic and psychiatric disorders. **Objectives:** This study strives to demonstrate an interdisciplinary care model incorporating psychiatric and neurologic clinical pharmacy MTM services to optimize patient care in a specialty ambulatory care setting. Primary outcomes will include medication appropriateness index score prior to vs after pharmacist intervention and severity of medication issues identified by pharmacists. **Methods:** This is an observational study of patients who received MTM services from clinical pharmacists embedded within a large outpatient neurologic and psychiatric health care center. Data collected for the study included demographics, medical conditions, medication issues identified by pharmacists, pharmacist recommendations and provider acceptance of recommendations, electronic medical record medication list updates, billing outcomes, and time spent by pharmacists to perform MTM services. **Outcomes:** In addition to primary outcome results, the following will be reported: patient demographics and medical conditions, rate of provider acceptance of pharmacist recommendations, rate of recommendation acceptance from outside providers vs providers within the neurologic center, estimate of costs potentially avoided due to pharmacist interventions, time spent by pharmacists performing MTM services, number and types of services provided by pharmacists, number of problems identified by pharmacists, number and type of pharmacist interventions, and number and type of updates made to patient medication lists in the electronic medical record.

Clinical Implications of High-Dose Benzodiazepine Use in Veterans Prescribed Ketamine or Esketamine for Treatment-Resistant Depression or Suicidal Ideation

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Type: Work in Progress. **Background:** Ketamine and esketamine have been shown to possess rapid-acting antidepressant properties and clinical benefits for treatment-refractory depression (TRD) and suicidal ideation (SI). Patients who receive ketamine for TRD or SI are often prescribed other psychotropic medications, such as benzodiazepines, thus necessitating an understanding of how drug-drug interactions may affect treatment outcomes. Literature suggests that concomitant benzodiazepine use may be associated with diminished antidepressant effects of ketamine analogues such as delayed response time or shortened duration of treatment benefits, with the possibility of high benzodiazepines doses leading to more pronounced effects of this interaction. **Objectives:** (1) Describe the demographics of veteran patients prescribed ketamine for TRD or SI with concomitant benzodiazepine use at a government-affiliated hospital. (2) Determine the clinical impact of the drug interaction between ketamine or esketamine and benzodiazepines. (3) Determine the impact of benzodiazepine dose with ketamine or esketamine treatment responsivity. **Methods:** This IRB-approved retrospective cohort study includes patients with treatment-resistant unipolar or bipolar depression or SI who received intravenous or intramuscular ketamine or intranasal esketamine between January 1, 2020 and December 1, 2022. Veterans included in our analysis will be categorized based on benzodiazepine use: none, low dose, or high dose (> 8 mg of diazepam equivalents/day). We are collecting demographic and clinical data, including but not limited to select psychiatric diagnoses, benzodiazepine prescription data including dose and as needed versus scheduled use, and ketamine and esketamine prescription data. Treatment responsivity is being assessed via change in Patient Health Questionnaire-9 and PTSD Checklist for DSM-5 (PCL-5) scores from initiation of ketamine/esketamine to 6 months after starting ketamine/esketamine treatment. Additional outcome data include number of unscheduled psychiatric hospitalizations, discontinuation of ketamine/esketamine therapy, and reported adverse effects. Inferential statistics will be performed to detect demographic and clinical differences between the groups. **Results:** To date, we have identified 148 veterans who meet study criteria. Most of the sample are male (72%) and white (75%) with an average age of 48 years. Of whom, 102 have been prescribed benzodiazepines and 46 have not. Our complete dataset, a discussion of our results and a conclusion will be provided at conference.

Clinical Pharmacist Intervention to Ensure Safe Stimulant Prescribing Practices at a Veterans Affairs Facility

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Type: Work in Progress. **Background:** The Psychotropic Drug Safety Initiative (PDSI) is a national VA quality improvement program aimed at improving psychotropic prescribing practices based on evidence and clinical practice standards. No clinical practice guidelines exist to guide safe prescribing practices of stimulant medications other than those associated with the medications' Drug Enforcement Agency schedule. PDSI recommends monitoring cardiovascular vital signs semi-annually and completion of a urine toxicology screen annually. PDSI also recommends a risk review of patients prescribed concurrent central nervous system depressants such as benzodiazepines, sedative-hypnotics, and opioids to ensure the benefits of coadministration with stimulants outweighs the risks. The purpose of this project is to encourage compliance to PDSI recommendations to ensure safe and appropriate monitoring and management of veterans prescribed stimulant medications. **Objectives:** (1) Evaluate the occurrence of co-prescriptions for benzodiazepines, sedative-hypnotics, and opioids in veterans prescribed stimulants. (2) Evaluate adherence with stimulant monitoring recommendations. (3) Measure the proportion of pharmacist recommendations that are implemented by the prescriber. **Methods:** This quality improvement project utilizes the Academic Detailing Stimulant Patient Report dashboard to identify veterans with an outpatient prescription for a stimulant and any co-prescription for benzodiazepines, sedative-hypnotics, and/or opioids. Veterans receiving hospice care, aforementioned prescriptions from outside the VA or temporary prescriptions will be excluded. Demographic information, stimulant monitoring criteria, and prescription characteristics for stimulants, benzodiazepines, opioids, and sedative-hypnotics will be collected. A pharmacy intervention note will be generated in the medical record to request a risk review and notify the stimulant prescriber of overdue stimulant monitoring parameters. The impact of this pharmacy intervention will be measured 60 days after intervention. Descriptive statistics and a McNemar test will be used to compare pre- and post- pharmacy intervention data. **Outcomes:** Number of co-prescriptions and compliance to stimulant monitoring requirements pre- and post- pharmacist intervention.

Comparing the Efficacy of Incorporating Intramuscular Midazolam or Lorazepam, or no Benzodiazepine, in Combination ith Haloperidol and Diphenhydramine for the Treatment of Acute Agitation

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Type: Work in Progress. **Background:** Acute agitation in the emergency department (ED) presents a vulnerable environment for workplace violence. Ineffective management of agitation can lead to harm or danger to the patient and healthcare team, longer time to psychiatric evaluation, and longer length of ED and hospital stay. Pharmacologic intervention for agitation typically consists of antipsychotic and sedative combinations which commonly include diphenhydramine, haloperidol, and lorazepam. The recent nationwide parenteral lorazepam shortage led to the study hospital transitioning to midazolam as an alternative benzodiazepine for agitation control. Further evidence is needed to support superiority of either benzodiazepine in combination with diphenhydramine and haloperidol for effective and safe management of agitation. **Objective:** Compare the efficacy and safety of intramuscular formulations of diphenhydramine, haloperidol, and midazolam (B55) or diphenhydramine, haloperidol, and lorazepam (B52) or diphenhydramine and haloperidol (B5) for time to overall stabilization of acute agitation. **Methods:** This IRB-exempt retrospective chart review will include patients who presented to the ED at a large community hospital between May 1, 2022 and October 31, 2022 and received either B55, B52, or B5 medications. Patients will be included if they received intramuscular formulations of the study medication in the ED. Exclusion criteria will include doses other than 50 mg of diphenhydramine, 5 mg of haloperidol, 5 mg of midazolam, or 2 mg of lorazepam administered as the first dose, and use of any scheduled benzodiazepines or antipsychotics in the preceding 24 hours of the first study medication administration. Demographic information on age, sex, race, and BMI will be collected. Psychiatric history and toxicology information will be collected to determine the suspected origin of agitation. Descriptive statistics and logistic regression will be used to describe any association between either study group, need of additional doses or medications, and patient-specific factors for optimal agitation control. **Outcomes:** Effectiveness of each group will be evaluated by comparing the frequency of additional doses of B55, B52, or B5 medications and additional intramuscular agents needed within 2 and 24 hours after the first study dose was administered for agitation control. Incidence of adverse events over a 48-hour period will also be assessed.

Comparison of Long-acting Injectable Antipsychotics With Oral Antipsychotics and Hospital Readmission Rates at 3 Months in Pediatric Patients

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Type: Work in Progress. **Background:** Long-acting injectable antipsychotics (LAIAs) were developed to improve medication adherence, and some studies indicate that using LAIAs instead of their oral counterpart reduces the risk of relapse and hospitalization. The use of oral formulations of antipsychotics is common in the pediatric population, but little is known regarding the off-label use of LAIAs in this population. Dosing recommendations for LAIAs are based on data from adult populations, and LAIA use in the pediatric population lacks long-term safety data. **Objectives:** (1) Compare hospital readmission rates of pediatric patients on LAIA therapy with those on oral antipsychotic therapy at 3 months. (2) Compare readmission rates at 6 and 12 months. (3) Analyze differences in chlorpromazine equivalents. **Methods:** This IRB-approved retrospective chart review will include pediatric patients under the age of 18 that were admitted to the psychiatric ward in a large academic hospital between January 1, 2016 and December 1, 2022, and required antipsychotic therapy. The experimental group will look at patients that were initiated on LAIA therapy during their hospital stay, and the control group will look at patients started on a new oral antipsychotic medication while admitted. Patients discharged on polypharmacy of 2 or more different antipsychotic medications and those age 18 and older will be excluded. Demographic information (age, sex, gender, race, and weight) will be collected. Other pertinent data to be collected include primary diagnosis, concurrent medications, psychiatric comorbidities, number of previous antipsychotic trials, number of previous hospitalizations, choice of antipsychotic used, number of hospital readmissions (at 3, 6, and 12 months), hospital length of stay, and chlorpromazine equivalents. Data analyses will include descriptive statistics, a propensity score matching to compare the two patient groups, and unpaired Student *t* test. **Outcomes:** We will report the readmission rate at 3 months for both the LAIA and oral antipsychotic groups. In addition, we will expand the readmission rate at 6 and 12 months for added long-term monitoring. Demographics, dose of antipsychotic,

chlorpromazine equivalents, hospital length of stay, proper medication administration, and side effect rates will also be reported.

Comparison of Propofol and Methohexital as Anesthetic Agents for Electroconvulsive Therapy

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Type: Work in Progress. **Background:** Depression affects over 8% of the US adult population, yearly. While antidepressants are effective treatments for depression, it is estimated that one in every three patients will not respond to medication. Electroconvulsive therapy (ECT) has been shown to be highly efficacious for patients with treatment-refractory depression that has not responded to antidepressants and for patients with severe depression who need treatment requiring a more rapid response. Anesthesia in ECT usually consists of an anesthetic agent, to eliminate the memory of the procedure, and a muscle relaxant, to minimize the risk of fractures. The choice of anesthesia medications varies among psychiatrists and anesthesiologists. At our institution, methohexital has primarily been used as our anesthetic agent of choice due to its rapid onset and quick duration of action. In July 2022, after experiencing supply shortages of methohexital, our health system switched to propofol. **Objective:** This project aims to compare propofol to methohexital for ECT. Primary outcomes include seizure duration, side effects, and time to regain consciousness. **Methods:** All patients 18 years of age or older will be included if they received at least one ECT procedure with methohexital prior to July 1, 2022, and received at least one ECT procedure with propofol after the switch. Anesthesia flowsheets and progress notes will be reviewed to evaluate anesthesia medication used, the timing of medications, and dosages. Vitals, time to awaken, use of additional medications, and side effects will also be collected from anesthesia notes. Psychiatrist notes will be reviewed for diagnosis, duration of the seizure (EEG and clinical duration), number of seizures per procedure, and home medications. Descriptive statistics will be used to compare differences between anesthetic agents. **Outcomes:** The primary goal of this project is to evaluate the following outcomes in patients who have received both methohexital and propofol for ECT: (1) Seizure duration and the number of seizure episodes, (2) time for patients to regain consciousnesses, (3) use of additional agents during ECT procedure, and (4) need for a patient to be switched back to methohexital.

Comparison of Safety, Efficacy, and Appropriateness of Dalfampridine Therapy Pre- and Post-PharmD Intervention: A Retrospective Chart Review

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Type: Work in Progress. **Background:** Dalfampridine is used for patients with walking impairment secondary to multiple sclerosis (MS) and may also help to reduce the need for other symptomatic MS medications including muscle relaxants such as baclofen. Current literature suggests that up to 50% of individuals treated with dalfampridine fail to respond and should be discontinued from therapy. To gauge efficacy (and appropriateness for continuation) of therapy, patients initiated on dalfampridine were assessed historically (pre-COVID) at baseline and again post-initiation via timed 25-foot walking (T25-FW) test. This monitoring has shifted towards virtual modalities in the wake of the COVID-19 pandemic, necessitating use of the twelve-item MS Walking Scale (MSWS-12), which can be implemented virtually. Since March 2020, a neurology clinical pharmacy specialist (CPS) has provided this monitoring. It is valuable to determine whether virtual monitoring administered by CPS has resulted in any change in the amount of patients who appropriately continued or discontinued dalfampridine based on response rate. A decrease in the use of symptomatic medications such as baclofen will also be evaluated as another potential indicator of efficacy. **Objectives:** Primary outcome: Analyze how virtual CPS monitoring changed the percentage of patients treated with dalfampridine who appropriately continued/discontinued therapy. Secondary outcomes: Determine whether dalfampridine decreased the need for other MS medications. Assess whether dalfampridine therapy increased commonly reported adverse events such as dizziness, falls, insomnia, nausea, and urinary tract infections (UTI). **Methods:** This retrospective, observational quality improvement project will include all patients who received $\geq$ 1 dose of dalfampridine at the VA Portland Health Care System between June 1, 2018 to November 30, 2022. This data will be divided into two groups (before and after CPS monitoring of dalfampridine). Endpoints will then be compared from before and after CPS intervention. **Outcomes:** Results will be reported as percentage of patients who appropriately continued or discontinued dalfampridine based on the results of the follow up tests. Secondary outcomes will be reported as percent decrease of other MS medication utilization or percent difference in adverse effects from baseline versus follow up.

Comparison of Weight-Based Valproic Acid Dosing in Treatment of Mental Illness Among Obese and Non-Obese Patients

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Type: Work in Progress. **Background:** Valproic acid (VPA) is a commonly used agent in the treatment of various medical and psychiatric conditions. In psychiatry, weight-based dosing of VPA may be preferred over fixed dosing in patients that require rapid mood stabilization. This approach can be challenging in obese patients due to a general paucity of literature exploring the dose-weight relationship of VPA and its correlation to a target therapeutic range of 50 – 125 mcg/mL. **Objectives:** (1) Compare valproic acid dose-weight relationships (mg/kg) and serum levels using total (TBW), ideal (IBW), and adjusted (ABW) body weight between non-obese and obese patients. (2) Assess the impact of variables such as sex, race, and age on the dose-weight relationship between the 2 groups. **Methods:** This retrospective chart review included adult patients between 18 to 65 years of age admitted to an inpatient acute psychiatric hospital between July 1, 2017 and July 1, 2022. VPA levels were included in the analysis if the patient received at least three consecutive days of stable oral valproic acid dosing with an appropriately collected total VPA level $\geq$ 50 mcg/mL at steady state. VPA levels were excluded if the patient received the extended-release (ER) formulation within 3 days prior to level collection, had active liver disease, or albumin level $<$ 3.5 g/dL. Study design will involve 2 comparison groups: non-obese (body mass index [BMI] 18.5 – 29.9 kg/m^2) and obese (BMI $\geq$ 30 kg/m^2). An unpaired Student *t* test will be used to assess for differences in mg/kg dosing between the two groups. Spearman rank correlation will be used to assess the dose-weight relationship using TBW, IBW, and ABW. **Outcomes:** Average age and BMI in the non-obese group was 39 years and 24.4 kg/m^2 respectively, and in the obese group was 38.7 years and 35.2 kg/m^2. Most non-obese patients were White/Caucasian (51.6%) and obese patients were most commonly White/Caucasian (47.3%) or Black/African American (47.3%). Average total daily dose of VPA and total VPA serum concentration in the non-obese group was 1451.6 mg and 88.8 mcg/mL, and in the obese group was 1626.3 mg and 88.2 mcg/mL, respectively. Primary and secondary outcomes will be reported using the statistical methods noted above.

Comprehensive Chart Evaluations by a Psychiatric Pharmacist in a Community Living Center to Improve Patient Safety Outcomes

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Type: Work in Progress. **Background:** Nearly 20% of adults greater than 65 years old are prescribed ten or more medications, also known as polypharmacy, which can lead to serious drug-drug interactions, drug-disease interactions, increased risk of falls, increased hospitalization, and increased mortality. This is especially concerning for those residing in community living centers (CLC) or long-term care facilities as these patients are generally more frail and susceptible to health risks and complications associated with polypharmacy. Psychiatric pharmacists can play a significant role in identifying how medications, behavioral and psychological symptoms of dementia, pain, and patient goals and values intersect to prevent future falls in a patient-centered way. Provision of comprehensive chart evaluations by a mental health clinical pharmacy practitioner as a member of the interdisciplinary team may improve patient outcomes for veterans admitted to the CLC at the Battle Creek VA Medical Center. **Objectives:** Identify the impact of a mental health clinical pharmacy practitioner as a member of the interdisciplinary team on improvement in quality of life and safety for veterans in the CLC. **Methods:** The project investigator will enter a comprehensive pharmacy review into the charts of patients admitted who have (1) history of a fall or (2) have been identified by their treatment team for review of behavioral or mental health concerns. This comprehensive pharmacy review will identify patient-specific risks vs benefits and provide recommendations to optimize medication management to improve psychiatric symptom management while minimizing risk of falls. **Outcomes:** We will report how many pharmacologic recommendations were made, the types of recommendations made, and how many recommendations were accepted. For patients with recommendations that were accepted, we will report how many patients stayed out of inpatient mental health post-review, how many falls occurred in the two weeks prior to and subsequent to review, and how many behavior notes were entered in the two weeks prior to and subsequent to review.

Cost-Avoidance Analysis of Clinical Pharmacist Interventions on Antipsychotic Therapy in Acute Care Psychiatry in an Indigent Minority Population

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Type: Work in Progress. **Background:** Many barriers including insufficient health insurance coverage as well as financial strain are present in indigent minority populations

requiring mental health treatment. Pharmacist intervention has been shown to optimize medication prescribing and reduce medication costs in patients on antipsychotic therapy at inpatient psychiatric facilities. The aim of this study is to analyze the impact of clinical pharmacist intervention on cost-avoidance at an inpatient psychiatric facility in an indigent minority population. **Objectives:** To determine the cost-avoidance of clinical pharmacist interventions on antipsychotic medications in a single-center inpatient psychiatric facility serving a significant minority and disadvantaged patient population. **Methods:** This IRB-approved retrospective chart review will include adult patients (n = 154) admitted to the psychiatric unit at a single institution on antipsychotic therapy that received a clinical pharmacist intervention between October 1, 2016 through May 1, 2021. Demographic data including age, gender, race, ethnicity, past medical history, income, and insurance coverage will be collected. Other relevant information that will be collected includes ICD-10 psychiatric diagnosis, previous hospitalizations, length of stay, indication for medication use, cost of medication, and clinical intervention type as documented in electronic medical records. Additionally, cost of clinical pharmacist intervention will be determined by intervention subtype and its corresponding cost based on averages reported in the literature, which will then be used to calculate the cost-avoidance for each intervention type. **Outcomes:** We will report the cost-avoidance of clinical pharmacist interventions found in indigent minority patients admitted to the behavioral health unit of the hospital. Each intervention subtype will be reported separately. Demographic data including race and income will be reported on the population sample.

Determining Actionable Veterans for Completion of Pharmacogenomic Testing to Guide Medication Therapy for Post-Traumatic Stress Disorder

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Type: Work in Progress. **Purpose:** According to the Department of Veterans Affairs, approximately 6 out of every 100 people will have Post-Traumatic Stress Disorder (PTSD), with this incidence higher in veterans. Selective serotonin reuptake inhibitors are considered first-line treatment. Pharmacogenomic testing uses individual metabolic profiles to tailor treatment, thus reducing trial time and side effects. Pharmacogenomic Testing for veterans (PHASER) is a nationally funded initiative to increase the availability of pharmacogenomic testing to VA medical centers. The purpose of this project is to implement PHASER at the Carl Vinson VA Medical Center and analyze the potential impact for patients suffering from symptomatic PTSD. **Methods:** This quality improvement project will be conducted in several stages. The first stage will be to identify patients with PTSD who may benefit from PHASER testing. Patients will be included if they have a documented diagnosis of PTSD, are taking a pharmacogenomically actionable antidepressant (sertraline, paroxetine, citalopram, or escitalopram), and have a PTSD Checklist for DSM-5 (PCL-5) score greater than 41, indicating severe PTSD. Patients with a comorbid diagnosis of bipolar disorder or schizophrenia will be excluded. Data collected will include age, current psychiatric medications, last fill date, and PCL-5 score within the last 6 months. The second stage will involve educating mental health providers regarding PHASER. A continuing education presentation will be provided on PHASER testing, interpreting results, and clinical application. Participants will be given a survey before and after this presentation to assess confidence with future use of pharmacogenomics testing. The third stage will involve implementing a clinic to provide PHASER services to eligible veterans. Patients identified during this preliminary project will be notified via a mailed letter. Those agreeing to testing will be referred to their medication prescriber to order tests and make recommendations based on results. A secondary project will be designed at this time to follow-up and determine overall impact of pharmacogenomic testing for patients with PTSD. **Results:** Currently in progress.

Don't be Rash: Risk of Cutaneous Reactions From Rapid Retitration of Lamotrigine

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Type: Work in Progress. **Background:** Lamotrigine is an antiepileptic drug (AED) that is commonly prescribed for psychiatric conditions such as bipolar depression. However, skin reactions ranging from mild maculopapular rashes to life-threatening, painful cutaneous conditions such as Stevens-Johnson Syndrome (SJS) or toxic epidermal necrolysis (TEN) may occur. The risk of lamotrigine-induced skin rash is proportionally related to high starting doses or rapid titrations. Concomitant use of valproate as well as discontinuation of cytochrome P450 (CYP) inducers and estrogen-containing oral contraceptives without appropriate dose adjustment may also increase the incidence of serious rash. Therefore, the FDA recommends a slow titration to reach the maintenance dose. If lamotrigine therapy is interrupted for more than five half-lives, the initial titration must be followed since the serum levels are reduced by

almost 97%. Despite the recommendation for retitration, some patients may restart lamotrigine without titration or consulting a provider, increasing their risk for possible cutaneous reactions. **Objectives:** The objective of this study is to determine if lamotrigine reinitiation without retitration impacts incidence of cutaneous reactions at a VA medical center. **Methods:** This retrospective chart review will include patients who received a prescription for lamotrigine from June 1, 2017 to June 1, 2022 at a VA medical center. The number of days between each refill will be calculated to determine the length of therapy interruption (if applicable). If lamotrigine was restarted after a break in therapy of more than five half-lives without retitration, the electronic health record will be reviewed for information regarding adverse cutaneous reactions occurring within eight weeks of reinitiation. **Outcomes:** The primary outcome will compare the percent of rash in patients who were restarted on lamotrigine without titration to those who were appropriately titrated. Secondary outcomes include percent of psychiatric admissions, percent of medical admissions, percent of emergency room visits, and incidence of side effects attributable to lamotrigine other than rash.

Effect of Direct-to-Consumer Education Plus Pharmacist Outreach on Benzodiazepine Prescribing in Veterans with Posttraumatic Stress Disorder

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Type: Work in Progress. **Background:** Benzodiazepines are widely prescribed across military populations for symptoms relating to posttraumatic stress disorder (PTSD) despite clinical practice guideline recommendations. Several studies have demonstrated the role of direct-to-consumer (DTC) written education in benzodiazepine deprescribing in older adults. In April 2021, a DTC written education program, including pharmacist-initiated outreach, was implemented at a Veterans Affairs Health Care System to reduce benzodiazepine prescribing in veterans with PTSD. **Objectives:** (1) Evaluate the implementation of a DTC written education plus pharmacist outreach program. (2) Compare the effect of DTC written education with and without pharmacist outreach on benzodiazepine dose and discontinuation. **Methods:** This quality improvement project included veterans with a diagnosis of PTSD receiving mental health specialty care, an active benzodiazepine prescription, and an upcoming benzodiazepine prescriber appointment. Veterans with a benzodiazepine prescription for a procedure or those whose prescriber deemed pharmacist contact not appropriate received DTC education but will be excluded from analysis of the primary and secondary outcomes. Veterans were mailed DTC written education on a rolling basis 2 to 8 weeks before a scheduled benzodiazepine prescriber appointment. Written education materials included a 1-page synopsis of the initiative and a 9-page booklet based on the Eliminating Medications Through Patient Ownership of End Results trial. Then, pharmacists attempted telephone outreach to veterans to supplement DTC educational material. Pharmacists incorporated outreach into established clinic workflow with the goal to contact as many veterans as possible before their scheduled appointment with the benzodiazepine prescriber. Both program and process evaluation will be completed, and descriptive statistics used to summarize results. **Outcomes:** The primary outcome will be the percent of veterans with a 50% or greater benzodiazepine dose reduction compared to baseline in average daily dose lorazepam equivalents 12 months after the benzodiazepine prescriber index visit. Secondary outcomes will be evaluated at 12 months post-index visit and include the percent of veterans with a 25% or greater dose reduction compared to baseline and complete cessation of benzodiazepines. Benzodiazepine prescriber appointment attendance will be assessed. Veteran characteristics will be reported in addition to key process variables including percent of veterans receiving pharmacist outreach and average duration of pharmacist visits.

Effectiveness of Group Battlefield Acupuncture to Reduce Pharmacologic Pain Medication Utilization

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Type: Work in Progress. **Background:** Pain is a component of several medical conditions and has significant physical, psychological, social, and economic burdens. Battlefield acupuncture (BFA) has been identified as an alternative to the initiation or continuation of opioid analgesics for chronic pain or as a supplement to other pain treatment modalities. BFA is effective for acute and chronic pain in individual and group settings, but its role in reducing opioid analgesic requirements and overall pharmacologic pain medication utilization has been minimally investigated. BFA administered in a group setting helps providers meet high levels of patient demand, without diminished clinical outcomes. Historically, VA Texas Valley Coastal Bend Health Care System (VCB) has lacked a group BFA clinic, though demand for BFA among our patient population is high. **Objectives:** (1) Assess the efficacy of group BFA to reduce pharmacologic pain medication utilization. (2) Assess the efficacy of group BFA to reduce prescription opioid requirements. **Methods:** Participants were recruited to group BFA if they had any diagnosed pain condition, completed an initial individual BFA treatment session, and agreed to group BFA services. Exclusion criteria include an

aversion to needles, history of vasovagal response to needles, pregnancy or clinical suspicion for pregnancy, or active infection at the needle insertion site. Group BFA clinics will be operational from December 13, 2022 through January 24, 2023. For objective one, a retrospective chart review will be conducted to obtain pharmacologic pain medication utilization as calculated by the medication possession ratio (MPR). For objective two, a retrospective chart review will be conducted to obtain an average daily morphine milligram equivalent (MME) dose. Demographic data including age, gender, mental health diagnosis, pain diagnosis, and pre- and post-group BFA pain scores will be obtained via retrospective chart review. **Outcomes:** We will report the percent decrease in MPR from 60 days before the initial group BFA appointment to 60 days after treatment. Secondary outcomes include the mean difference in average daily MME dose 60 days prior and 60 days after the initial group BFA appointment and the mean difference between pre- and post-group BFA pain scores.

Effectiveness of Mood Stabilizers Versus Second-Generation Antipsychotics for Pediatric Bipolar Disorder

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Type: Work in Progress. **Background:** Pediatric bipolar disorder (PBD) continues to be a debilitating psychiatric illness, with earlier onset being associated with higher rates of recurrence and poorer psychiatric outcomes. Early identification and proper diagnosis can potentially aid in reducing the number of psychiatric-related hospitalizations and treatment resistance. Despite the same diagnostic criteria, the symptoms and presentation of PBD differ in frequency and intensity among the child and adolescent populations compared to adults. Additionally, treatment recommendations continue to rely heavily on evidence from adult studies and clinical experience. Recent guidelines have suggested a shift in medication preference from mood stabilizers to antipsychotics for management of acute symptoms. With limited available evidence in children and adolescents, treatment approaches remain ambiguous, especially when it comes to assessing the effectiveness of mood stabilizers and antipsychotics in the pediatric population. **Objectives:** (1) Assess the effectiveness and safety of mood stabilizers compared to second-generation antipsychotics for management of PBD. (2) Identify prescribing patterns in accordance with recent shifts in guideline recommendations. **Methods:** This retrospective electronic medical record review will be conducted on pediatric patients admitted to the acute care pediatric psychiatry or general pediatric service at a large urban, academic medical center between January 1, 2018 and October 31, 2022. Patients between 7 and 17 years with a DSM-5 diagnosis of bipolar I disorder, bipolar II disorder, or unspecified bipolar disorder will be included. **Outcomes:** The primary outcome will evaluate treatment response of antipsychotics compared to mood stabilizers defined as a reduction of at least 50% in presenting symptoms of bipolar disorder. Symptom reduction will be assessed through the identification of the following search terms found within clinical documentation: distractibility, racing thoughts, decreased need for sleep, grandiosity, increased energy or agitation, and pressured speech. Additionally, measures of safety will be addressed through therapeutic drug monitoring for mood stabilizers. Secondary outcomes will evaluate length of hospitalization and 30-day re-admission rates. Subgroup analysis will aim to assess the effects of dose adjustment versus change in therapy, monotherapy versus combination therapy, and psychiatric comorbid conditions on treatment response.

Evaluating Outcomes of the Miami Veterans Affairs Healthcare System Syringe Service Program

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Type: Work in Progress. **Background:** In April 2020, the Biden-Harris Administration's Statement of Drug Policy Priorities included mandates for federal agencies to remove barriers to federal funding for syringe service programs (SSP). SSPs can help lower the risk of acquiring and transmitting infections, lower rates of overdose death, and increase engagement in substance use treatment programs through comprehensive harm reduction education, sterile supply distribution, and connection to services. The SSP recently implemented in the Miami VA provides harm reduction education and sterile injection supplies, as well as advocating for other preventative measures. **Objective:** To expand understanding of local SSP participant needs and enhance clinical utility and future growth of the program. **Methods:** Patients will be routed to the syringe service program after asking for inclusion or being identified by their care team. Discreet information is collected at the time of intake to the syringe service program with an anonymous patient questionnaire or documentation into the medical record with patient permission utilizing the locally designed SSP template. Data intended to be collected include baseline patient demographics (age, race, sex), SSP site location utilized, number of participants who are new to a syringe service program, number of patients receiving naloxone for the first time, the number of naloxone kits dispensed and frequency of naloxone use, the number of referrals to services (social work, hepatology, infectious disease, HIV pre-exposure prophylaxis, sexually transmitted infection

testing, and substance use treatment), and substances used. **Outcomes:** Currently, educational sessions have been held for over 300 interdisciplinary providers on the benefits and availability of the SSP along with harm reduction education clinical pearls. Providers attending these sessions included primary care physicians, physician assistants, nursing, support staff, psychiatrists, infectious disease physicians, pharmacists, hospital administration, and trainees. Direct to consumer educational brochures have been created and distributed throughout the hospital. Four SSP distribution contact points are available within Miami and Broward Clinic locations. The syringe service program is still in the early stage with one participant at time of abstract submission.

Evaluating Provider Perception on the Role of Naloxone Use in Veterans With Stimulant Use Disorder

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Type: Work in Progress. **Background:** A fourth wave in the opioid epidemic has emerged with an increase in overdose deaths attributable to psychostimulants in combination with opioids. This shift in overdose deaths is thought to be attributed to changes in drug use, as well as illicit stimulants being combined with opioids. Due to this shift, the Veterans Health Administration (VHA) has increased efforts to supply patients with naloxone rescue kits as a risk mitigation strategy. **Objectives:** (1) Develop and present educational materials to providers reviewing stimulant use disorder (StimUD) and the implications of this disease state in the setting of ongoing opioid epidemic. (2) Identify changes in prescriber perception of StimUD through distribution of an anonymous survey. (3) Increase prescribing of naloxone rescue kits for patients with StimUD at VA Sierra Nevada Health Care System (VASNHCS). (4) Instill positive change at VASNHCS in the perception and prescribing patterns for patients with StimUD. **Methods:** This quality improvement project will address naloxone use at our facility as a risk mitigation strategy for opioid overdose deaths in patients with StimUD. First, the current provider perception of naloxone use in patients with StimUD at our facility will be assessed through an anonymous survey. This survey will include questions on perceptions surrounding naloxone use in patients with StimUD and ask prescribers to estimate naloxone prescriptions written for StimUD patients over the past 3 months. Results from this survey will be analyzed as baseline data, and educational material highlighting the importance of naloxone distribution in this patient population will be developed and distributed. Three months after educational material has been provided, an identical second anonymous survey will be administered. Data from this second survey will be analyzed and compared to baseline data to assess for a positive change in naloxone distribution and a positive change in provider perception on naloxone use in this population. Lastly, naloxone distribution for patients with StimUD will be tracked before and after the educational intervention via the Academic Detailing Opioid Overdose Education and Naloxone Distribution (OEND) dashboard. **Outcomes:** We will report changes in prescriber perception of naloxone use amongst patients with StimUD and changes in naloxone rescue kits prescribed for this population.

Evaluating the Impact of Psychiatric Pharmacists in a Developmental Disabilities Clinic

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Type: Work in Progress. **Background:** Individuals with intellectual and developmental disabilities (IDD) are at increased risk for multiple comorbidities, including mental illness and behavioral disorders. Due to complex health needs, this population has higher use of pharmacologic treatments, including psychotropics. Opportunities exist for psychiatric pharmacists (PPs) to implement an innovative, collaborative service to address medication management issues in this population. **Objective:** Evaluate the impact of integrating PPs into a primary care clinic serving adults with IDD. **Methods:** PPs piloted a new service at a county-based primary care clinic that serves adults with IDD. Between August 29, 2022 and January 9, 2023, pharmacists engaged in direct patient care and consulted at the clinic every Monday morning in collaboration with attending physicians, medical residents, and nurses. Patient encounters occurred in clinic, curbside, or via video visits to meet unique patient needs. In this study, data will be collected from adult patients with a diagnosis of IDD. Patient demographics and clinical characteristics, such as gender, primary diagnosis, comorbid mental illness, other medical conditions, psychiatric medications, and total number of medications will be collected. PP interventions will be documented and divided into various categories. Interventions will also be classified as psychiatric or nonpsychiatric in nature. **Outcomes:** Based on a 10-week pilot, 190 PP interventions were made. The most common types of PP services included medication regimen reviews (48%), collaborative care (14%), provider education (11%), medication histories (9%), and patient/caregiver education (8%). Neuropsychiatric medications were involved in 70% of

pharmacist interventions. Of 69 patients seen at this clinic, 51% had a diagnosis of at least one comorbid psychiatric condition, with the most prevalent being anxiety (17%) and sleep disorders (16%). 61% of patients were taking at least one psychotropic medication, with the most common being mood stabilizers/antiepileptic drugs (AED) (35%), antidepressants (29%), and antipsychotics (23%). Data will be further collected and evaluated as PPs involvement continues to expand. By analyzing this data, we hope to demonstrate the significance of integrating a PP into this practice setting, thereby justifying a full-time position to optimize psychopharmacotherapy, provide medication education, and address the collaborative care needs of patients with IDD.

Evaluating the Usefulness of Culturally Sensitive Mental Health Resources for PharmD Students and Graduate Students

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Type: Work in Progress. **Background:** Literature indicates racially and ethnically minoritized individuals have less access to mental health services compared to white individuals and are more likely to receive lower quality care, delay seeking treatment, and terminate treatment prematurely. A previous study at the site institution identified lack of knowledge, access to resources, and representation or cultural understanding as being barriers that have prevented Black, Indigenous, and People of Color (BIPOC) students and residents from seeking mental health care. To meet the needs of our school community for better access to and knowledge of finding resources with cultural understanding, and helping mentors triage and refer learners in crisis, the school collated and promoted culturally sensitive mental health resources on finding inclusive support. **Objective:** To evaluate the usefulness of culturally sensitive resources on a pharmacy school's Wellness Resource webpage. **Methods:** A novel 17-item 1-month post- and 4-month post-survey was developed to evaluate the usefulness of culturally-sensitive mental health resources on a pharmacy school's wellness webpage. PharmD and PhD students, faculty advisors, and office of student affairs were recruited via E-mail at a single institution. All survey responses were included in the analysis and descriptive statistics and summarization of themes for open-text responses were utilized. **Outcomes:** One hundred and fifty-one (20.5%) participants completed the 1-month post-survey (75.6% PharmD or graduate students, 8.4% faculty or staff member). The majority identified as White (56.3%) followed by Asian (19.3%), female (72.3%), and heterosexual (77.3%). While 59.3% (n = 83/140) were aware of the school's wellbeing website, only 12.9% (N = 17/132) were aware of recently added culturally sensitive mental health resources. A majority (35.4%) heard about the school's wellbeing website from a faculty advisor/staff member. Six reported using the culturally affirming mental health resources, and two used to find general resources and information. While 53% were somewhat or very unlikely to use these resources for themselves, 50.4% indicated they were somewhat or extremely likely to use these resources for someone else. Open-text responses revealed the most common themes for improving the usefulness of the culturally sensitive mental health resources were increased visibility and awareness of resources and inclusivity of other cultures not represented. Final results, including 4-month post-survey analysis, are pending.

Evaluation of Changes in Clozapine Prescribing Patterns Among Providers at VAPORHCS Following Expansion of Prescribing Privileges within VA Practice

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Type: Work in Progress. **Background:** Clozapine is FDA approved for treatment-resistant schizophrenia and suicidal behaviors in patients with schizophrenia and schizoaffective disorder but is also used in those with a diagnosis of schizoaffective, bipolar disorder, or dementia. This medication can be potentially lifesaving given its anti-suicidal properties but is often used as a last resort due to restricted prescribing and tolerability concerns. Until recently, only psychiatrists were eligible to prescribe clozapine through the Veterans Health Administration (VHA). As of May 2022, VHA directive 1108.17 expanded prescribing privileges to any provider with a national provider identifier (NPI) that works within a psychiatric setting. This expands prescribing to all medical providers, nurse practitioners, physician assistants, and clinical pharmacy practitioners to begin prescribing this medication. However, these providers must still register through the national clozapine REMS website as well as VHA National Clozapine Coordinating Center (NCCC) in order to prescribe. This registration requires additional training and education to occur along with activation of keys within the electronic health record. **Methods:** This project is a quality assurance/quality improvement project that will utilize retrospective chart review in order to assess for changes in prescribing patterns following the implementation of the new VHA directive. Information will be collected from February 1, 2022 until January 31, 2023. **Objectives:** The primary outcome is whether there has been a change in type of provider prescribing clozapine. Secondary outcomes evaluated include number of first-time clozapine prescriptions prescribed,

number of previous antipsychotic trials for those with a new prescription, incidence of neutropenia (ANC < 1500/μL) in the time frame, time since last face-to-face visit (either video or in-person), dates of most recent metabolic monitoring (hemoglobin A1c, lipids) as well as electrocardiogram (EKG), and days since last Abnormal Involuntary Movement Scale (AIMS) exam. Demographic information will also be collected including age, race/ethnicity, and gender. **Originality and significance of project:** To authors' knowledge, this is the only investigation being conducted to consider changes in prescribing patterns related to the new VA directive. This project will identify changes in prescribing patterns that will detect future areas of focus indicated to increase healthcare access to this potentially life-saving medication.

Evaluation of Rehospitalization Rates for Alcohol Use Disorder Management in the Inpatient Veteran Setting Based on Alcohol Use Disorder Medication Initiation

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Type: Work in Progress. **Background:** Alcohol is the most widely used substance in the United States and alcohol use disorder (AUD) affects 14.1 million American adults. Acamprosate, disulfiram, and naltrexone are all approved for treatment of AUD, however, current evidence demonstrates that these medications are underused. AUD negatively impacts physical health, interpersonal relationships, occupational functioning, and is among the highest contributing diagnoses for 30-day hospital readmission rates. It is also associated with significant healthcare costs and excess mortality. Medication treatment is associated with reductions in relapse, mortality, and alcohol-related admissions. **Objectives:** (1) Compare rehospitalization rates of patients admitted for alcohol related disorders who were initiated on AUD medication versus those not initiated on medication. (2) Analyze if initiation of AUD medications reduced rehospitalization rates. (3) Evaluate the number of patients started on AUD medications post hospitalization. **Methods:** This study is a single-site, retrospective chart review that will include adult patients with a primary diagnosis related to AUD who were initiated on acamprosate, naltrexone, or disulfiram while inpatient on a medical floor at the Central Texas Veterans Health Care System between March 1, 2020 and March 1, 2021. The control group will include patients who were not initiated on an AUD medication within 24 hours of discharge. Patients were excluded if they were discharged directly to a substance use treatment program or to acute inpatient psychiatry unit. Demographic information (age, gender, and race), DSM-IV or DSM-5 diagnoses, and specific AUD medication initiated will be collected. Descriptive statistics will be performed to describe demographics. Chi square test or Fisher's exact test will be used to analyze nominal data and one-way analysis of variance will be used to analyze continuous data. **Outcomes:** The primary outcome is rehospitalization rates in those initiated on AUD medications while inpatient versus patients who were not initiated on AUD medication. Secondary outcomes include whether initiation of AUD medication reduced rehospitalization rates and the number of patients started on AUD medications post hospitalization.

Evaluation of Veterans on Buprenorphine-Based Products for Opioid Use Disorder Who are Stable for Step-Down Treatment From Specialty Care

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Type: Work in Progress. **Background:** Opioid use disorder (OUD) is a chronic, relapsing disease that is effectively treated with opioid agonists. The optimal duration of treatment has not been clearly defined, although opioid agonists are increasingly being utilized for durations that extend beyond remission. The partial mu-opioid agonist, buprenorphine, carries a smaller risk of respiratory depression than full agonists and can be prescribed in an office-based setting, unlike methadone. Looming regulatory changes will remove the requirement of X-waivers for buprenorphine prescribers which may decrease barriers to prescribing. Currently, buprenorphine-based products for OUD (BOUD) are primarily prescribed at this facility by clinicians who specialize in substance use disorders (SUD). Identifying patients stable on BOUD can facilitate their transition out of specialty SUD clinics to primary care and mental health settings which can make treatment more accessible. This will also allow SUD specialists to focus on more acute or complicated patients. **Objectives:** (1) Identify patients who meet a definition of stability and are candidates for step-down care by evaluating treatment history and patient specific factors. (2) Create a protocol for step-down care of patients stable on BOUD for management by primary care or mental health teams. **Methods:** This retrospective chart review will include adult patients who filled prescriptions for BOUD written by clinicians on the SUD team between December 1, 2021 and December 1, 2022. Stability will be determined using several factors including BOUD fill history, recent dose changes, hospital admissions, appointment history, and illicit substance use. Data will be reported using descriptive statistics. **Outcomes:** We will use the created protocol to identify the number of stable patients on BOUD who may be appropriate candidates to step down care from a SUD specialty care setting. We will also describe the patient characteristics and prescribing patterns of the patients who are identified as stable.

Examining the Efficacy and Safety of Intravenous Ketamine Versus Intranasal Esketamine for Treatment Resistant Depression

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Type: Work in Progress. **Background:** Major depressive disorder (MDD) is a common and debilitating mental health condition with roughly 30% of patients being refractory to available treatments. In recent years, ketamine and esketamine have been increasingly utilized as rapid-acting antidepressants for treatment-resistant depression (TRD), and are currently available in multiple formulations (intravenous [IV], intramuscular [IM], and intranasal [IN]). Repeated administration has shown that their antidepressant and anti-suicidal effects can be maintained. However, limited evidence exists regarding the long-term effectiveness and safety of ketamine and esketamine treatment among veterans. We plan to examine the comparative safety and effectiveness of IV ketamine and IN esketamine for TRD. **Objectives:** Compare IV ketamine versus IN esketamine with respect to (1) proportion that achieve symptom remission of TRD; (2) likelihood of experiencing a sustained response; and (3) rates of adverse events. **Methods:** This retrospective cohort study will include adult patients with bipolar depression and major depression who received IV ketamine or IN esketamine for $\geq$ 6 weeks between January 1, 2019 and December 31, 2022. All subjects will have evidence of passive or active suicidal ideation at the time of ketamine or esketamine initiation via the Columbia-Suicide Severity Rating Scale. Patients who have a history of current substance use disorder or presence of psychosis will be excluded. Demographic (age, gender, ethnicity, weight), clinical (diagnosis via ICD-10 codes), number of prior antidepressant exposures and ketamine/esketamine treatment (dose, frequency, and duration), and health utilization (psychiatry related hospital admissions or unscheduled outpatient visits) will be collected. This information will be extracted from computerized medical records. Inferential statistics will be performed to detect differences between those who receive IV ketamine versus IN esketamine. **Outcomes:** Symptom remission will be defined as having a Patient Health Questionnaire-9 (PHQ-9) score $<$ 5 after at least 6 weeks of treatment. Patients who continue to have PHQ-9 scores $<$ 5 until treatment completion will be considered as having a sustained remission. Any medical record documentation of an adverse event associated with treatment will be tabulated. Results of this study will contribute to existing literature regarding different formulations and analogs of ketamine in veterans.

Expanding Access to Pre-Exposure Prophylaxis (PrEP) to Veterans Who Inject Drugs

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Type: Work in Progress. **Background:** Human immunodeficiency virus (HIV) transmission and acquisition are increased among persons who inject drugs (PWID) because of drug use behaviors and high-risk sexual behaviors when using. To reduce risk of HIV transmission, PrEP is recommended among various populations, including PWID. Based on results from a medication use evaluation, we have identified that our institution is not reaching this population. It is unclear whether the use of PrEP in PWID at our institution is limited by patient awareness, patient unwillingness, lack of provider education, or structural barriers. **Objective:** The objective of this quality improvement project is to expand access to PrEP for PWID at our institution through provider education and patient outreach. **Methods:** Three approaches will be used to screen and outreach patients who may be eligible for PrEP. First is a retrospective chart review of all persons prescribed buprenorphine and/or buprenorphine-naloxone between August 30, 2021 and August 30, 2022 at our institution. Patients with documentation of injection drug use in the past year will be contacted for screening of PrEP eligibility. All patients will be educated on overall harm reduction. The second approach involves a partnership with the Opioid Treatment Program (OTP) at our facility. Through the partnership, patients prescribed methadone or buprenorphine-naloxone through this clinic can be reached. Our team will educate patients and spread awareness for PrEP as well as educate OTP providers to expand their existing harm reduction education. The final approach is provider education within mental health and primary care. Many providers may not be aware that PrEP is indicated for PWID. Education will allow providers to screen and offer PrEP to PWID within their patient panel. Patients who are eligible and willing to start PrEP will be referred to Infectious Disease (ID) for prescribing and monitoring. Referral to ID is the current standard of practice for all patients initiated on PrEP at our facility. **Outcomes:** Outcomes from this project will be discussed at the AAPP Annual Meeting.

Factors Affecting Treatment Retention for Long-Acting Injectable Antipsychotics

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Type: Work in Progress. **Background:** Long-acting injectable antipsychotics (LAIAs) are indicated for the treatment of schizophrenia or bipolar disorder depending on the exact antipsychotic. LAIAs may improve treatment retention and reduce psychiatric hospitalizations compared to oral antipsychotics. Prior to LAIA initiation, patients should be stabilized on an equivalent oral antipsychotic demonstrating safe and effective use. The treatment duration of oral antipsychotics prior to LAIA initiation is variable given time to effect and previous antipsychotic trials. Clinical trials have utilized durations of 1 to 4 weeks of oral antipsychotic treatment to establish safe and effective use prior to LAIA initiation. There is limited literature available regarding treatment retention for LAIAs in patients on involuntary psychiatric commitments. Identifying potential factors influencing LAIA treatment retention may assist in improving outcomes for psychiatric patients initiated on LAIAs. **Objectives:** This project aims to identify the factors that may influence treatment retention of LAIA treatment for psychiatric disorders based on LAIA treatment retention at 1, 3, 6, and 12 months. **Methods:** A retrospective review was conducted of patients initiated on a LAIA while inpatient in a psychiatric hospital within an academic medical center between January 1, 2021 and December 31, 2021. Each patient must have been initiated on an oral antipsychotic prior to LAIA initiation. Individual chart review was conducted to obtain the desired data. Preliminary data collection included demographic information, duration of oral antipsychotic treatment prior to LAIA initiation, LAIA treatment retention at 1, 3, 6, and 12 months, LAIA dose adjustments, reported side effects, documented efficacy, psychiatric legal commitments, prior antipsychotic trials, psychiatric readmissions, and psychiatric emergency department visits. **Results:** Results are currently preliminary with 52 patients meeting inclusion criteria. LAIA treatment retention included 31 patients (59.6%) at 1 month, 26 patients (50%) at 3 months, 18 patients (34.6%) at 6 months, and 13 patients (25%) at 12 months. We hypothesize that potential factors influencing LAIA treatment retention included medication efficacy, side effects, duration of oral therapy prior to LAIA initiation, prior antipsychotic trials, concurrent substance use, and psychiatric legal commitments. These factors will be explored and analyzed to identify if they are correlated with LAIA treatment retention.

Gender Health Client Perceptions of Clinical Psychiatric Pharmacist Interactions: A Convergent Parallel Mixed Method Study

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Type: Work in Progress. **Background:** Gender diverse people, defined as gender identities that demonstrate a diversity of expression beyond the binary framework, represent a historically marginalized population who routinely encounter barriers in obtaining adequate health care. This is of considerable concern as gender diverse patients are more likely to have co-occurring psychiatric disorders and are statistically more likely to die by suicide compared to their non-gender diverse counterparts. However, with the initiation of an involved psychiatric pharmacist, this may spark a change within this narrative. There is currently minimal literature on the role of a pharmacist as a member of the interdisciplinary team specifically in this treatment setting. Therefore, the objective of this study was to evaluate the patient perspective of a clinical psychiatric pharmacist in a gender health program. **Purpose:** The purpose of this study is to gather qualitative and quantitative information to determine the perception of adult clients in a gender health program about their interactions with a clinical psychiatric pharmacist. Patients who are gender diverse will be engaged in one-on-one interviews and complete a survey about their experiences. The results will also be used to refine the clinical psychiatric pharmacist practice using client perspectives. Secondarily, these themes will be used to assess and improve the psychiatric clinical pharmacist practice within this program setting. **Methods:** This study will use a convergent parallel mixed methods design using qualitative one-on-one interviews and a quantitative Likert scale survey to assess the experiences of gender health clients related to their mental health appointment interactions with a clinical psychiatric pharmacist. Study participants will be asked to complete a Qualtrics survey prior to interview. Telephone interviews will be scheduled for 30 minutes with the resident investigator at the convenience of the study participant. Interviews will be audio-recorded with the permission of the participant to ensure complete capture of participant responses. The quantitative study data will be aggregated and used to triangulate and support the qualitative themes developed from the interview responses. Study participants will be recruited from a generated list of clients who have at least one mental health appointment with the clinical psychiatric pharmacist.

Identifying Predictors of Adherence to Long-Acting Naltrexone Injection Following Discharge From an Acute Inpatient Psychiatric Unit

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Type: Work in Progress. **Background:** Alcohol use disorder (AUD) is a problematic pattern of alcohol use, which causes significant impairment in patients' functioning and increases the risk for accidents, violence, suicide, and alcohol withdrawal. Acamprosate, disulfiram, and naltrexone are FDA-approved medications for AUD, which may decrease alcohol intake and mitigate risk of complications. Naltrexone, an opioid receptor antagonist, is available in oral and injectable formulations. Injectable naltrexone is administered once monthly and is thought to benefit patients with poor medication adherence. Identifying predictors of adherence to long-acting naltrexone injection may provide valuable insight to guide clinical decision making for the management of AUD. **Objectives:** (1) Assess patients who are prescribed injectable naltrexone following discharge from an acute inpatient psychiatric unit for adherence. (2) Compare adherent and nonadherent patients to identify predictors of adherence. **Methods:** A retrospective chart review will be conducted to assess patients who were initiated on long-acting naltrexone while hospitalized in an acute inpatient psychiatric from January 1, 2015 to July 31, 2022. Eligible patients will be identified using the Veterans Health Information Systems and Technology Architecture (VISTA). Patient data will be collected through the VA Computerized Patient Record System (CPRS). Patients who receive at least 1 scheduled dose of long-acting naltrexone after discharge will be deemed adherent. The total number of doses received after discharge and the proportion of days covered (PDC) will also be collected as additional indicators of adherence. Age, gender, previous admissions for alcohol detoxification, previous medication trials for alcohol use disorder, duration under active Clinical Institute Withdrawal Assessment (CIWA) protocol, use of benzodiazepines for alcohol withdrawal, heavy alcohol use, comorbid substance use orders, and involvement in psychotherapy will be assessed as potential predictors of adherence. **Outcomes:** We will report the rate of adherence to injectable naltrexone following discharge from an acute inpatient psychiatric unit and compare potential predictors of adherence between patients who are adherent and nonadherent.

Impact of a Pharmacist-Driven Tardive Dyskinesia Education Service on Adherence to Recommended AIMS Monitoring

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Type: Work in Progress. **Background:** Antipsychotics continue to be an advantageous option in a multitude of different mental health disorders including but not limited to schizophrenia, bipolar disorder, treatment-resistant depression, and acute psychosis. Despite the versatility of antipsychotics, continual monitoring remains essential given the opportunity for different adverse effects to arise, such as tardive dyskinesia (TD). The Abnormal Involuntary Movement Scale (AIMS) is a standardized tool used to record the occurrence of TD in patients receiving antipsychotics and to assess severity over time. **Objective:** The objective of this study is to assess the overall facility compliance rates for TD monitoring before and after the implementation of a pharmacist-driven education program. Subsequently, factors including documented TD diagnosis, vesicular monoamine transporter (VMAT) inhibitor utilization, and average length of time since the last documented AIMS exam will also be recorded to determine a potential impact post-intervention. **Methods:** Veterans with an active antipsychotic prescription being managed by the facility Outpatient Mental Health Clinic between August 1, 2021 to July 31, 2022 will be identified via the High Risk Drug Monitoring Dashboard. Initial adherence rates for the Abnormal Involuntary Movement Scale (AIMS) monitoring, diagnosis of TD, and active orders for VMAT inhibitors will be determined through a chart review of patients' profiles in the Computerized Patient Record System (CPRS). AIMS adherence rates will be determined through the facility AIMS Note Template completion. Subsequently, the search text for "AIMS" in CPRS will also be performed to determine potential exams not documented through the AIMS template note. Concurrently, pharmacy-led education concerning the AIMS exam will be provided to current prescribers in the targeted Outpatient Mental Health Clinic, then reassessment of AIMS compliance will be determined using the aforementioned process. **Outcomes:** The initial facility compliance rates for the AIMS exam will be recorded and then compared to the subsequent compliance rates once pharmacy-driven education services are completed to determine the efficacy of the intervention. Additional factors related to TD treatment and monitoring will also be recorded.

Impact of an Alcohol Use Disorder Order Set in the Emergency Department on Veteran Care and Health Outcomes

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Type: Work in Progress. **Background:** Alcohol use disorder (AUD) remains a prominent and undertreated public health concern in the United States leading to negative health outcomes, economic burdens, and increased mortality. Emergency Department (ED) encounters offer a unique opportunity to further engage patients in treatment for AUD. Despite rising rates of alcohol-related ED visits, FDA-approved medications for AUD remain underutilized and data surrounding the initiation of AUD medications in the

ED is limited. Naltrexone is a first-line pharmacotherapy option for AUD that has been shown to reduce cravings, increase periods of abstinence, and decrease drinking. One recent study showed that naltrexone initiation in the ED reduced the rate of 30-day ED repeat visits and hospital readmissions. Benzodiazepines have remained first-line treatment for the management of alcohol withdrawal syndrome (AWS) given their efficacy of managing symptoms and preventing withdrawal-related seizures, but benzodiazepine-sparing regimens may provide an alternative option for specific cases. Studies assessing the use of non-benzodiazepine medications for mild AWS have found that gabapentin provides similar efficacy to benzodiazepines while reducing cravings and daytime sleepiness. To implement best practices and improve veteran care, an ED order set was updated to provide alternative options to diazepam for the management of AWS, guide initiation of FDA-approved AUD medication treatment, and arrange outpatient follow-up with addiction specialists. **Objectives:** The aim of this study is to evaluate AUD-related treatment outcomes and other changes to veteran care following the implementation of an updated AUD order set in the ED. **Methods:** This study will be a retrospective chart review of patients from the electronic health record (EHR) who had orders derived from the AUD order set for up to one year prior to and 2 months after implementation of an updated order set. Structured Query Language will be used to identify patients who met the inclusion criteria and collect data from the EHR. **Outcomes:** The primary outcome is to compare the 30-day ED repeat visit and hospitalization rate for patients pre- and post-implementation of the updated order set. Other outcomes include assessing the prescribing of AUD medications, the type of detoxification medication(s) ordered, and timeliness of outpatient follow-up.

Impact of Antipsychotic-Induced Weight Gain on Discontinuation of Oral Second-Generation Antipsychotics at a Veterans Hospital

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Type: Work in Progress. **Background:** The Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE I) study assessed the efficacy of second-generation antipsychotics (SGAs) compared to a first-generation antipsychotic (FGAs) in patients with schizophrenia. The study found that "olanzapine was the most effective in terms of the rates of discontinuation. . .[and] was associated with greater weight gain." This can be interpreted to conclude that despite olanzapine's high risk of weight gain, patients stayed on the medication for a longer duration because of its effective symptom control. However, since the CATIE trial's publication in 2005, there have been many new antipsychotics available that are popular among patients and providers due to their weight-neutral properties. **Purpose:** The purpose of this study is to assess the association between discontinuation rate and risk of weight gain among patients on high-, moderate-, and low-risk SGAs. This study will allow for assessment of discontinuation rates in patients on newer SGAs, that were not studied in the 2005 CATIE trial, in order to determine their efficacy against their risk of weight gain. **Methods:** This study is a single center, retrospective chart review and cohort study will be of patients who were initiated on an SGA between January 1, 2021 and June 30, 2021. Patients will be stratified based on the risk of weight gain as determined by the American Psychiatric Association's 2020 Schizophrenia Guidelines. Weight will be tracked for one year post-SGA initiation. Patients will be excluded due to use of long-acting injectable antipsychotics, poly-antipsychotic therapy, conditions involving frequent changes in fluid status and weight (including pregnancy), and long-term inpatient admission during the study period. Primary outcome is percent discontinuation rate due to weight gain. Secondary endpoints will include percent discontinuation for any reason and percent of patients with significant weight gain (defined as $\geq$ 7% baseline weight). The outcomes will be analyzed using one-way analysis of variance (ANOVA) to compare discontinuation rates among high-, moderate-, and low-risk SGA cohorts. The study will also evaluate the facility's compliance with recommended monitoring frequency of weight. **Conclusion:** In progress

Impact of Early Peer Specialist Involvement on Medication Assisted Treatment Engagement and Treatment Retention in Patients With Substance Use Disorders

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Type: Work in Progress. **Background:** A substance use disorder is a mental disorder that affects a persons behavior, leading to an inability to control ones use of substances of abuse. The degree of severity varies from moderate to severe, and greatly varies in complexity. Peer support specialists are mental health professionals that have had "lived" experience and are trained to provide support to those with mental health issues, psychological traumas, or substance use disorders. These individuals are an integral part of the healthcare team and assist in providing support services such as peer-to-peer mentoring, housing assistance, and facilitating treatment planning with clinical teams. Medication-assisted treatment (MAT) is the use of medications, in conjunction with behavioral therapies, to provide a holistic approach to the treatment of substance use disorders,

specifically, alcohol, benzodiazepine, and opioid use disorder. **Objectives:** The primary objective of this study is to assess effectiveness of early peer engagement with patients presenting with moderate-severe alcohol, benzodiazepine, or opioid use disorder, in improving 14- and 30-day MAT retention rates. The secondary objective of this study is to assess barriers to treatment retention. **Methods:** A retrospective chart review will be conducted in a large multisite healthcare system containing five hospitals. One hundred patients 18 years of age or older, with documented substance use disorders presenting after an overdose and/or those that had MAT consults placed during their admission will be reviewed. Analysis of the electronic medical record will include patient demographics, race, length of stay, substance use history, rehospitalization frequency, frequency of peer specialist contact, 14-day retention, 30-day retention, and successful patient transitions. The time interval for chart analysis will be from June 1, 2022 through November 30, 2022. A peer specialist workflow was implemented September 1, 2022. Descriptive statistics will be conducted to analyze all baseline and demographic characteristics. Pearson correlation coefficient will be used to determine relationships between peer engagement and patient retention. **Outcomes:** Effectiveness of peer-to-patient engagement will be analyzed to determine the need for additional standardized training or workflow changes to address barriers in engagement.

Impact of Participation in an Adolescent Medication Group on Pharmacy Intern Implementation and Knowledge of Psychotropic Medications and Patient Outcomes

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Type: Work in Progress. **Background:** Attention-deficit/hyperactivity, anxiety, and depressive disorders are the most commonly diagnosed mental health conditions in children. Approximately 10.9% of adolescents have taken medication for their mental health, compared to 6.2% of children. Among adolescents, non-adherence to psychotropic medication is a clinically relevant challenge, with rates of non-adherence ranging from 6% to 62%. Medication education is thought to be a useful intervention to promote adolescent adherence to psychotropic medications. The Psychiatry Pharmacy Intern Shift (PPIS) was created in 2019 at a children's hospital to optimize psychotropic medication-related outcomes and provide early exposure for pharmacy students to child and adolescent psychiatry. PPIS is a weekly, one-hour Patient Medication Education Group (PMEG) on the inpatient adolescent psychiatry unit in which medication-themed games (eg, Jeopardy, Bingo, Jenga) are utilized to discuss psychotropic medications and further child and adolescent engagement. Following PMEG, pharmacy interns review medication-related interventions with the psychiatric pharmacist, as well as document psychotropic medication related interventions in the electronic health record. **Objectives:** Evaluate the impact of PPIs on (1) Pharmacy intern psychotropic medication knowledge; and; (2) Patient care through pharmacy intern psychotropic-medication related interventions. **Methods:** Pharmacy interns completed an online survey prior to involvement in PPIS (baseline), post-training (time point 1), and post-staffing one year of PPIS (time point 2). The online survey consists of three sections: (1) mental health attitudes/stigma; (2) psychotropic medication knowledge; and (3) PMEG self-efficacy. Anonymous survey data was delivered, stored, and interpreted via RedCap®. Pharmacy intern psychotropic-medication interventions documented in EHR from January 1, 2022 to November 18, 2022 were collected and assessed for interventions including medication change (eg, dose modification, new medication, medication taper), identification/management of drug interactions, therapeutic drug monitoring, and identification/management of side effects. **Outcomes:** Descriptive statistics will be used to report demographic data and the impact of pharmacy intern psychotropic-medication related interventions, while pertinent statistical tests will be used to compare changes in knowledge assessment data from baseline to time point 2.

Impact of Therapeutic Drug Level Monitoring of Antipsychotics in Treatment Management at an Inpatient Psychiatric Hospital

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Type: Work in Progress. **Background:** Therapeutic drug monitoring (TDM) is considered a valuable tool in psychiatry. Although TDM is utilized regularly for mood stabilizing medications such as valproic acid and lithium, monitoring of antipsychotic serum levels is not currently part of routine clinical practice. Of note, the 2020 American Psychiatric Association guidelines for the treatment of patients with schizophrenia state the utility of antipsychotic TDM is unclear other than for clozapine or to assess adherence. Other research shows TDM for antipsychotics

other than clozapine can be useful to assess poor therapeutic response, reasons for adverse side effects, or to assess the impact of drug interactions. The scarcity of data on "real-world" experience utilizing TDM to guide antipsychotic therapy has limited its clinical application. Increasing knowledge on reasons for and utility of antipsychotic TDM, within an inpatient psychiatric setting, can help clinicians better utilize TDM. **Objectives:** (1) Evaluate the reason for antipsychotic TDM at an inpatient psychiatric hospital. (2) Compare whether levels that were in-range or out of range led to significant medication changes. (3) Analyze and determine whether antipsychotic levels were drawn and interpreted appropriately. **Methods:** Individuals who had an antipsychotic blood level drawn since May 1, 2021, will be invited to consent to allow investigators to analyze existing chart data regarding how antipsychotic blood levels informed their treatment. Data to be collected from the patient's electronic medical record include age, ethnicity, race, gender, diagnosis, comorbidities, adverse drug reactions, medication list, doses and frequency, antipsychotic used, antipsychotic serum level, laboratory values, and timeline of course of treatment. Chart notes will be reviewed to collect reasons for ordering the antipsychotic level, collection time, and drug therapy decision. Descriptive statistics will be used to compare patient outcomes of levels that were in range and those out of range. **Outcomes:** Reasons for obtaining antipsychotic TDM and antipsychotic levels will be reported. Levels will be evaluated for appropriate draw time and interpretation. Regimen changes based on level interpretation as in range or out of range will be analyzed and compared. Individual patient efficacy and safety outcomes will be described.

Implementation and Analysis of Harm Reduction Education Groups for Behavioral Health Patients

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Type: Work in Progress. **Background:** Drug overdoses have exceeded 100,000 in recent years and have been driven by illicitly manufactured fentanyl, surpassing overdose deaths involving heroin and prescription opioids. Fentanyl test strips and naloxone are effective means of harm reduction and increasingly accessible in communities. Pharmacy Medication Education Groups (PMEGs) can provide education on harm reduction measures to patients at risk of overdose or to those who may live in communities at high risk of overdose. **Objectives:** (1) Implement education groups on harm reduction measures and available community resources for behavioral health patients. (2) Collect and analyze data on effectiveness of education groups using feedback surveys and dispensing data for fentanyl test strips and naloxone on discharge. **Methods:** This is an IRB-exempt study at a behavioral health facility. Prior to education sessions, pharmacy personnel and pharmacy learners completed training in the use of fentanyl test strips and naloxone; groups were led by pharmacy learners under the supervision of pharmacists. Topics discussed in these group sessions included the importance and utilization of naloxone and fentanyl test strips, utilization of community resources, and other harm reduction strategies. Patients voluntarily attended PMEGs and completed anonymous pre- and post-session surveys that will be used to analyze their perceptions of the educational sessions. Participation was documented in the electronic health record. Data will be collected through retrospective analysis of the electronic health record, survey results, and dispensing data of fentanyl test strips and naloxone on patient discharge. **Outcomes:** Four groups have been offered to date with a total of 25 surveys completed. Preliminary data shows education groups result in an increase in familiarity, confidence, and likeliness to use fentanyl test strips and naloxone. The biggest change seen was with confidence in using fentanyl test strips with a 50% increase in patients reporting "very confident" and "extremely confident" on post-group surveys. At the conclusion of education groups in February 2023, we will also report on the number of fentanyl test strips and naloxone dispensed to patients at discharge. Final results and analyses are pending.

Implementation of a Harm Reduction Program at the West Palm Beach VA Health Care System

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Type: Work in Progress. **Background:** Drug overdose deaths in the United States continue to rise with a total of 91,799 deaths reported in 2020. Harm reduction provides a comprehensive, integrated care approach to expand services and continuum of care for persons who inject drugs (PWIDs) that generally lack a usual source of care. As data suggests, people who use syringe service programs are five times as likely to enter treatment for substance use disorder (SUD) and three times as likely to report reducing or discontinuing injection drug use. The Veterans Health Administration has proposed national initiatives to support the expansion of these services within health care systems and local communities. **Objectives:** (1) Develop and implement a Harm Reduction Program at the West Palm Beach Veterans Affairs Health Care System (WPBVAHCS). (2) Assess the impact of the Harm Reduction program.

Methods: This quality improvement project will devise a standard operating procedure that outlines the referral process to the program. The Harm Reduction Program will provide PWIDs with education on safer injection practices, access to supplies such as syringes and sharps containers, naloxone education and distribution, testing and treatment for Human Immunodeficiency Virus, Hepatitis B and C, and sexually transmitted diseases, and referral for SUD treatment. The program will be a consult service and will be led by a Clinical Pharmacist Practitioner. Patients eligible to participate in the program will include veterans enrolled in the WPBVAHCS. Staff will be educated on utilization of the consult service and harm reduction methods. Demographic information (age, gender, race, living situation, comorbid SUD, comorbid mental health disorders, and drug of choice) will be collected. Other pertinent data to be collected include the quantity of harm reduction consults, supplies, naloxone, vaccinations, and labs ordered, and amount of referrals to the SUD clinic and/or Infectious Disease clinic. Descriptive statistics will be performed to evaluate program reach. **Outcomes:** We will describe the process of implementation of the Harm Reduction Program. The number of harm reduction consults, supplies, and referrals will be reported to examine the utility of the program. Demographics will be considered to identify patient populations that may benefit from the program.

Implementation of a Multiple Antipsychotic Pharmacy Consult at a Veterans Affairs Health Care System

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Type: Work in Progress. **Background:** The initial goal of treatment with antipsychotics in schizophrenia is to reduce acute symptoms, while maintenance treatment aims to prevent symptom recurrence and improve functioning and quality of life. Current guidelines suggest that if a patient has minimal or no response to two trials of antipsychotic medication, then a trial of clozapine is recommended. Studies have shown that clozapine is often underutilized, and that many patients may benefit from earlier initiation. Therapy with multiple antipsychotics has been shown to have utilization rates of 4% to 35% in outpatient populations, and in 30% to 50% of inpatient populations. Guidelines suggest that although augmentation therapy can be considered, a trial of clozapine should not be delayed. It is also notable that guidelines suggest the most effective combinations include clozapine as well. Prior projects at this facility have demonstrated low utilization rates of clozapine, specifically in patients on multiple antipsychotics. **Objectives:** (1) Analyze Prior Authorization Drug Request (PADR) consult approvals and denials for the use of multiple antipsychotics utilizing a local Criteria for Use (CFU) guidance on appropriate prescribing. (2) Identify potential barriers to clozapine prescribing. **Methods:** Effective December 19, 2022 a PADR consult is required at this facility for all new start, outpatient antipsychotic prescriptions that would lead to therapy with two or more antipsychotics in veterans with schizophrenia. A local CFU was also implemented, to ensure objective evaluations of the PADR consult. A retrospective chart review will include adult patients with a diagnosis of schizophrenia or schizoaffective disorder who had a PADR placed for multiple antipsychotic therapy between December 19, 2022 and March 15, 2023. **Outcomes:** The primary outcome of this project will be the approval rate of PADR consults utilizing the CFU. Demographics of patients in each group will also be reported. Secondary outcomes include reasons for multiple antipsychotic use, if clozapine was offered or trialed, and analyzing potential barriers to clozapine prescribing at this VA.

Implementation of a Pharmacist-Driven Antipsychotic Taper Protocol for Acute Agitation and/or Delirious Hospitalized Patients

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Type: Work in Progress. **Background:** Antipsychotics are commonly prescribed for hospitalized patients with acute agitation and/or delirium; however, these antipsychotics can be continued upon discharge without reassessment. This can inadvertently lead to long-term use of antipsychotics exposing patients to unnecessary adverse effects. Our community hospital has been implementing a pharmacist-driven antipsychotic taper protocol for intensive care unit (ICU) patients which helped to decrease rates of continuation upon discharge from 45% in 2018 to 21% in 2021. However, this service has not been extended to non-ICU patients. **Objectives:** To evaluate the effect of a pharmacist-driven taper protocol on the rate of antipsychotics continued at hospital discharge for acute agitation and/or delirium. **Methods:** This is a single-centered, IRB exempted, performance improvement project to be conducted from January 9, 2023 through March 31, 2023 in a community hospital located in South Florida. A prospective chart review will be conducted for patients with antipsychotics orders initiated inpatient for acute agitation/delirium. If the episode of acute agitation/delirium is documented as resolved, the pharmacist will recommend an antipsychotic taper per an established protocol. The control group is the rate of patients discharged on antipsychotics in 2021 for acute agitation/delirium. Patients are excluded if less than 18 years of age, pregnant, were on an antipsychotic prior to

admission, or if received as a one-time dose. Pertinent data to be collected include demographics, the antipsychotic ordered/indication, specialty of ordering physician, total daily dose (mg) and days on therapy, if patient qualified for taper, if recommendation from pharmacist was accepted, if antipsychotic was continued upon discharge, if treatment for agitation/delirium was restarted, and any reported adverse effects. **Outcomes:** The primary outcome to be reported is the rate of patients continued upon discharged on an antipsychotic for acute agitation/delirium. Secondary outcomes will include the prescribing patterns of the antipsychotics, patients qualifying for taper, accepted taper recommendations, failed antipsychotic taper, and reported adverse effects.

Implementation of a Pharmacist-Led Suicide and Overdose Risk Mitigation Clinic at a VA Medical Center

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Type: Work in Progress. **Background:** There have been more than 932,000 intentional or unintentional overdose related deaths since 1999, with 91,799 in 2020 alone (a 31% increase from 2019). Nearly 7% of the deaths were intentional, although the actual number may be higher given challenges with distinguishing intentional vs accidental overdose postmortem. Limiting supplies of medications, blister packing medications, and medication lock boxes have been recommended for overdose risk mitigation, but guidance on who to approach for intervention and how these strategies can be incorporated into routine clinical practice is largely unknown. **Objectives:** Evaluate the feasibility, acceptability, and impact of a pharmacist-led overdose risk mitigation appointment, to include medication lock box distribution and education, in a patient population that is at high risk for intentional and/or accidental overdose. **Methods:** Patients will be identified during weekly interdisciplinary team meetings where cases are reviewed in which veterans have either (1) reported a recent intentional or accidental overdose ('secondary prevention') or (2) been identified to be at high statistical risk for overdose ('primary prevention') between November 1, 2022 and April 30, 2023. Prospective patients will be contacted by a pharmacy resident to assess interest in attending a single visit to discuss risk mitigation strategies including medication lock box distribution and education, naloxone prescription, and medication disposal envelopes. Medication reconciliation will be completed and veterans will be encouraged to have a support person attend the visit. Variables for the primary objective include total number of patients contacted, number of attempts to contact patient, number of patients agreeable to an appointment (and number with support person involved), and average time spent per patient. **Outcomes:** Descriptive statistics will be used to assess feasibility of implementation, including calculating an attainability ratio and total time per patient. Patient satisfaction and utilization of the risk mitigation strategies will be assessed via a 10-question survey. Impact will be assessed by calculating a mean change in number of prescriptions and determining total number of other interventions implemented, including 30-day supply adjustments and distribution of medication lock box, disposal envelopes, medication organizations, and naloxone kits.

Implementation of an Ambulatory Alcohol Detoxification Clinic at a Veterans Affairs Medical Center

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Type: Work in Progress. **Background:** Outpatient management of individuals with mild to moderate alcohol withdrawal syndrome is generally safe, effective, and less expensive when compared to inpatient treatment (Muncie et al. Am Fam Physician. 2013;88(9):589-95.). The 2021 VA/Department of Defense Clinical Practice Guidelines for the Management of Substance Use Disorders suggests considering carbamazepine, gabapentin, or valproic acid as an alternative to benzodiazepines for mild to moderate alcohol withdrawal (Va/DoD clinical practice guideline for substance use disorders. Department of Veterans Affairs. 2021). The Chillicothe VA had traditionally performed alcohol detoxification on inpatient units. An outpatient clinic was developed in 2021 to serve this need in low-risk patients. **Objectives:** (1) Review appropriateness of patient to participate in outpatient alcohol detoxification. (2) Evaluate the number of patients who complete outpatient detoxification. (3) Examine days to relapse and days without drinking. (4) Assess type and frequency of complications. **Methods:** This retrospective chart review will assess information prior to and after patient participation in ambulatory detoxification. Charts will be reviewed from a list of veterans transferred to the substance use disorder clinic psychiatrist for medication assessment. Information collected during the review will include patient demographics, medication information (medication name, medication strength, dosing frequency, date therapy was started, date therapy was stopped), Clinical Institute Withdrawal Assessment Alcohol Scale Revised (CIWA-Ar) score and date of assessment, completion of therapy (yes/no), days to relapse, type of

complications, and frequency of complications. **Conclusion:** The investigators will report the number and percentage of participants who complete the ambulatory detoxification program. They will also assess the impact of this program on the patient population at the Chillicothe VA Medical Center. For those who participate in the program, the days to relapse and type and frequency of complications will be reviewed.

Implementation of Harm Reduction Services at a Veterans Affairs (VA) Facility

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Type: Work in Progress. **Background:** The principle of harm reduction is to mitigate the negative effects of problematic health behaviors without necessarily expecting the patient to abstain from the behavior. While there may be a need to reduce harm from risky behaviors, many providers may be hesitant to offer harm reduction services as abstinence has traditionally been the recommended method to address drug use. Recent harm reduction attitude survey studies have primarily been completed in non-VA settings and limited only to health professionals. At this VA facility, a harm reduction consult was initiated in May 2022 to assist providers in ordering products, services, and consults. A qualitative survey will identify target audiences and assess current attitudes, understanding, and behaviors in order to develop pertinent education materials to personnel. Additionally, it is important to understand current utilization of the harm reduction consult since its implementation. **Objectives:** (1) Determine VA personnel attitudes, understanding, and willingness to offer harm reduction. (2) Identify current prescribing/ordering practices. (3) Identify which services are most involved in identifying patients at risk of harm reduction. **Methods:** This IRB-approved qualitative study will be conducted at a single center VA medical facility. A survey collecting demographic information (surveyor's profession, years of experience, practice setting, age, gender, race, and ethnicity) and knowledge of, willingness to offer, and general attitudes towards harm reduction utilizing Likert scales will be sent out to providers and other personnel from a variety of clinical and non-clinical services. Additionally, a retrospective review from May 30, 2022 to January 31, 2023 from the facility's electronic health record (EHR) systems will be conducted to review the harm reduction menu utilization collecting the ordering service, patient demographics (age, gender, race, relevant diagnosis), and products/services/consults ordered. **Outcomes:** We will report demographic information of survey responders and attitudes on harm reduction services to understand current attitudes and behaviors of VA personnel to provide harm reduction services. Since the implementation of the harm reduction consult, pertinent data will be extracted to describe current utilization and ordering practices. Descriptive statistics will be utilized to report findings.

Implementing Naloxone Kit Distribution in a VA Hospital Emergency Department

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Type: Work in Progress. **Background:** Opioid overdose deaths are increasing in California, with nearly 7000 deaths in 2021. To reduce opioid-related mortality, California's Department of Public Health issued a standing order, allowing naloxone distribution in settings like emergency departments where at-risk patients may present for treatment. Emergency department-based naloxone distribution has not been implemented at a VA hospital in California. **Objectives:** (1) Implement a process for stocking and dispensing intranasal naloxone take-home kits in a VA hospital emergency department. (2) Increase the number of naloxone kits dispensed to at-risk veterans in the emergency department. **Methods:** This project will be completed in four phases: (1) Develop a procedure for stocking intranasal naloxone kits in the emergency department (July 11, 2022 to September 30, 2022); (2) Develop a protocol for dispensing take-home naloxone to at-risk veterans (October 3, 2022 to October 31, 2022); (3) Provide overdose education and naloxone distribution training to emergency department staff (November 10, 2022 to January 20, 2023); and (4) Share results with facility leadership for ongoing process improvement (January 23, 2023 to June 30, 2023). This project was evaluated as a non-research quality improvement project by the Veterans Affairs Office of Research and Development Electronic Determination Aid algorithm. **Outcomes:** The primary outcome is the change in percent of at-risk veterans receiving naloxone during an emergency department visit from May 27, 2022 to February 28, 2023. The secondary outcome is the number of emergency department staff trained in providing overdose education and naloxone distribution. The Veterans Health Administration Academic Detailing Emergency Department Opioid Safety Initiative Dashboard will be used for data collection. Descriptive statistics will be used to evaluate results. **Interim Data Analysis:** As of January 10, 2023, 22 emergency department nurses were trained in the naloxone stocking and dispensing process. The percent of at-risk veterans receiving naloxone during an emergency department visit increased from 7.45% at baseline to 18.42% on December 27, 2022. At baseline, there were 87 at-risk veterans who were not dispensed naloxone in the emergency department. These veterans were a mean age of 65 years, primarily male

(93%), white (51%) or Black or African American (33%), prescribed chronic opioids (52%), diagnosed with opioid use disorder (37%), and had no past naloxone kit dispensed (29%).

Implications of Clozapine Monitoring During the COVID-19 Pandemic

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Type: Work in Progress. **Background:** Clozapine is the drug of choice for treatment-refractory schizophrenia and patients who are at an increased risk of suicidal or aggressive behavior. Monthly monitoring of an absolute neutrophil count (ANC) is required to detect severe neutropenia (defined as ANC $<$ 500/μL), which is a significant adverse effect associated with clozapine usage. However, during the COVID-19 pandemic, laboratory monitoring became less frequent due to decreased access to healthcare services, and concern for increased viral exposure. Our study aims to understand the impact of less frequent laboratory monitoring on incidence of severe neutropenia for patients prescribed clozapine for greater than 12 months. **Objectives:** Our primary objective is to evaluate the discontinuation rate of clozapine due to severe neutropenia during the COVID-19 pandemic. Secondary objectives will include (1) all-cause discontinuation rate of clozapine; (2) the correlation between average time between lab draws and discontinuation rates; (3) the correlation between duration of clozapine use and discontinuation rates; and (4) differences in discontinuation rates among different Veterans Integrated Services Networks (VISNs, ie, 18 regional systems of care within the Veterans Health Administration [VHA]). **Methods:** This IRB-approved retrospective study from March 1, 2020 to July 31, 2021 includes all adult patients within the VHA who have been prescribed clozapine for at least 12 months prior to the start of our study. Patients will be excluded from the study if they were prescribed clozapine for less than one year due to the higher risk of severe neutropenia, or were receiving clozapine from any source other than the VHA. Demographic data will also be collected, including indication for use, concomitant antipsychotics, age, and race. Descriptive statistics will be performed to analyze both study objectives and demographic data. About 2900 unique patients have been identified through preliminary data collection and will be included in the study. **Outcomes:** We will report the incidence rate of severe neutropenia during the COVID-19 pandemic and stratify the result based on average time between lab draws, duration of clozapine use, and different VISNs.

Improving Hemoglobin A1c Monitoring of Veterans on Second-Generation Antipsychotics through Implementation of an Expanded Ordering Template

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Type: Work in Progress. **Background:** Individuals with serious mental illnesses have a two-fold increased prevalence of cardiovascular disease and diabetes compared to the general population. This risk is further compounded when these individuals receive antipsychotic medications, which are the mainstay of treatment for schizophrenia and many other psychiatric conditions. Certain second-generation antipsychotics (SGAs) have been associated with greater risk of metabolic abnormalities, including hypertension, dyslipidemia, weight gain, obesity, glucose dysregulation, and insulin resistance. Over time, these effects can lead to metabolic syndrome, poor cardiovascular outcomes, and type 2 diabetes. Despite these serious metabolic risks, guideline-concordant monitoring frequency of SGAs is often not standardized and suboptimal in clinical practice. Although monitoring policies for SGAs and clinical reminders are in place at the VA Texas Valley Coastal Bend Health Care System (VATVCBHCS), 20% of patients with an active SGA prescription did not have a hemoglobin A1c (HbA1c) obtained within the past 12 months. **Objectives:** Improve HbA1c monitoring in VATVCBHCS veterans on second-generation antipsychotics. **Methods:** Participants were selected if they had an active SGA prescription, including both oral and long-acting injectable formulations, and did not have an HbA1c value obtained within the past 12 months (October 17, 2021 through October 17, 2022). A retrospective chart review was performed to collect demographic information (age, gender, race, ethnicity, weight), as well as other pertinent data, including antipsychotic prescribed, length in days since last filled, and qualification of ordering provider (eg, MD, PharmD, NP, etc.). A review of VATVCBHCS's policy on the use of psychotropic agents was provided to mental health prescribers outlining the recommended frequency and importance of metabolic monitoring. Additionally, a new SGA ordering template was implemented to include the auto-population of veterans' last recorded metabolic lab values, as well as direct lab ordering capabilities, in order to streamline the process of gathering updated parameters. On March 17, 2023, the same subject selection criteria will be used to generate a patient list to compare pre- and post-intervention data. **Outcomes:** We will report the percent decrease in number of veterans with an active SGA prescription who have not had an HbA1c obtained within the past 12 months.

Improving Management of Opioid Withdrawal Symptoms on an Inpatient Psychiatry Unit at Salem Veterans Affairs Health Care System

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Type: Work in Progress. **Background:** All opioid medications carry a boxed warning for addiction, abuse, and misuse, as chronic use of these medications may result in tolerance, physical dependence, and opioid use disorder (OUD). The abrupt discontinuation or rapid dose reduction of exogenous opioids in a physically dependent person may result in somatic and psychological symptoms, also called opioid withdrawal symptoms (OWS). Individuals experiencing OWS may report to emergency departments with complaints of autonomic arousal, anxiety or irritability, restlessness, insomnia, bone aches and myalgia, nausea and/or vomiting, diarrhea, and abdominal cramping. Due to differences in guideline availability, limitations with controlled substance prescribing, and formulary restrictions, routine clinical practices at Salem Veterans Affairs Health Care System (SVAHCS) lack standardization in medications used to manage OWS. **Objectives:** (1) Establish an evidence-based, inpatient opioid withdrawal protocol to improve consistency and accuracy of management of OWS. (2) Evaluate provider use and satisfaction with protocol implementation will be measured after protocol use by a self-administered post-implementation survey, validated using Burns' clinical sensibility testing tool. **Methods:** An opioid withdrawal protocol based on current evidence-based guidelines for OWS management was developed. The order set was revised during collaboration with emergency department psychiatry attending and mental health clinical pharmacist practitioners (CPP), incorporating recommendations guided by their current prescribing practices. This proposed order set includes scheduled clonidine, hydroxyzine, and trazodone in addition to as needed medications for common withdrawal symptoms. The protocol also includes a monitoring order set, providing guidance to nursing for use and documentation of clinical opiate withdrawal scale (COWS) scores. Following approval by Pharmacy and Therapeutics (P&T) committee, this protocol has been implemented into an electronic order set in Computerized Patient Record System (CPRS). Education will be provided to emergency medicine and mental health physicians, physician assistants, nurse practitioners, pharmacists, nurses, and trainees regarding proper utilization of the protocol. **Outcomes:** We will report number of participants requiring opioid withdrawal medication management and describe protocol use by evaluating prescribing practices and utilization of the order set post-implementation. Also, a provider satisfaction post-implementation of the opioid withdrawal protocol will be examined.

Incidence of Anti-Hypertensive Therapy Initiation in Patients Taking Serotonin and Norepinephrine Reuptake Inhibitors: An Evaluation of Prescribing Cascades at Gundersen Health System

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Type: Work in Progress. **Background:** Inappropriate prescribing practices remain major determinants of excess healthcare costs and patient morbidity. One avenue of inappropriate medication prescribing involves a pattern known as the prescribing cascade. Prescribing cascades occur when the adverse effect of one medication is misinterpreted as a new condition that requires independent intervention. To date, a multitude of clinical trials and reviews have described prescribing cascades with the use of non-steroidal anti-inflammatory drugs, thiazide diuretics, and antipsychotics. Despite known impacts on hemodynamic parameters, limited research has been conducted regarding the use of SNRIs and potential prescribing cascades involving anti-hypertensive medication initiation. **Objectives:** Determine if SNRI and anti-hypertensive medication prescribing cascades are occurring among patients receiving outpatient care through the regional clinics of a large western Wisconsin, tri-state area health system. **Methods:** This IRB-approved, retrospective chart review will include patients receiving outpatient care through the regional clinics of a large health system in the western Wisconsin, tri-state area from September 1, 2016 through September 1, 2021. Patients in the study group, ie, SNRI cohort, will consist of adults $\geq$ 18 years old with an active SNRI prescription (ie, duloxetine, venlafaxine, desvenlafaxine, milnacipran, or levomilnacipran). The control group will include adults $\geq$ 18 years old who do not have active SNRI prescriptions but are otherwise matched with the study group based on patient specific demographic (gender, age, race, BMI) and medical characteristics (obstructive sleep apnea, chronic kidney disease, alcohol use disorder, tobacco use disorder). Patients will be excluded if they have documented diagnoses or histories of Cushing syndrome, pheochromocytoma, primary aldosteronism, hyperthyroidism, pre-existing hypertension, or take other medications known to increase blood pressure. Patients from each cohort will be evaluated on whether anti-hypertensive medication was initiated during the study's timeframe, with therapy initiation being attributable to an SNRI if prescribed within 12 months of the SNRI. **Outcomes:** Final data analysis and results will be presented at the 2023 AAPP Annual Meeting. If applicable, informa-

tion gathered from this study will be used to educate outpatient providers about the presence of prescribing cascades in an effort to limit their occurrence and advocate for alternative prescribing approaches.

Increasing Naloxone Prescription Rates in a Veteran Population with Stimulant Use Disorder Through Combination Pharmacist Outreach and Education to Mental Health Professionals

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Type: Work in Progress. **Background:** The prevalence of stimulant-involved overdose deaths has increased within the last decade in the United States in both the general population and in United States Armed Forces veterans. These stimulant-involved overdose deaths are largely driven by cocaine and methamphetamine-involved overdoses. Of note, many of these stimulant-involved overdose deaths co-involve opioids. To address the rise in concurrent stimulant and opioid-involved overdoses, the Psychotropic Drug Safety Initiative from the Veterans Health Administration implemented measures to improve the care of veterans identified with stimulant use disorder (StUD). One measure is the metric, "Naloxone_StimUD," that identifies the percentage of veterans with an StUD diagnosis prescribed the opioid reversal agent, naloxone. At the Veterans Affairs Texas Valley Coastal Bend Health Care System (VATVCBHCS), many patients were identified by Naloxone_StimUD for potential opportunities to provide opioid education and naloxone distribution (OEND). **Objectives:** To improve naloxone access to veterans diagnosed with StUD within the VATVCBHCS. **Methods:** To improve the Naloxone_StimUD metric, clinical pharmacist practitioners will call veterans identified by the Naloxone_StimUD patient report to offer OEND. Additionally, education will be provided to mental health professionals serving veterans with StUD about the prevalence of concurrent stimulant and opioid-involved overdoses, the purpose of Naloxone_StimUD metric, and the use of a streamlined process for alerting clinical pharmacist practitioners to veterans with StUD requesting OEND. The Naloxone_StimUD report will be used to document the total number of veterans diagnosed with StUD, the number of veterans eligible for a naloxone prescription, and the current percentage of veterans with StUD prescribed naloxone within the VATVCBHCS. Pre-intervention data will be recorded on November 1, 2022 and post-intervention data will be recorded on March 3, 2023. Patient characteristics will be collected from the report including age, gender, ICD-10 codes and diagnostic classification, duration of StUD diagnosis, and date of last scheduled appointment in an outpatient mental health clinic. **Outcomes:** We will report the percentage increase in veterans with StUD prescribed naloxone after 5 months of provider education and clinical pharmacist practitioner outreach.

Increasing the Dispensing of Naloxone to At-Risk Patients in the Emergency Department

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Type: Work in Progress. **Background:** Per the Centers for Disease Control (CDC) provisional data, it is estimated that in a 12-month period ending in June 2022, there have been a reported 102,842 deaths due to overdose in the United States. The CDC reported in 2020 that 75% of drug overdose deaths involved opioids. In the third quarter of 2022, 2 out of 73 patients at-risk for opioid overdose (2.74%) received naloxone on discharge from the Northeast Ohio Healthcare System (VANEOHS) emergency department (ED). This is below the national VA Hospital average of 13.22% and the level 1a facility benchmark (58.89%), which is determined by averaging the ten top performing level 1a facilities, based on the ED Opioid Safety Initiative (OSI) Dashboard. In addition, this impacts Joint Commission accreditation standard MM.08.01.01. At-risk patients were defined, in short, as those with an opioid use disorder (OUD) diagnosis with or without medication for OUD, those receiving chronic opioid therapy, and/or those with opioid intoxication/poisoning ED discharge codes. Failure to provide naloxone to at-risk patients may result in serious adverse health events, including death, due to overdose. **Objective:** The primary objective is to increase the naloxone dispensing rate to at-risk patients in the ED from 2.74% to at least 50% by the end of April 2023. **Methodology:** Lean Six Sigma methodology will be used to complete this quality improvement project. A sample of patients who had been seen at the VANEOHS ED from August 1, 2022 to November 1, 2022 and were determined to be at-risk for opioid overdose will be obtained via the ED OSI Dashboard. Data will be used to evaluate the current process of prescribing at-risk patients naloxone prior to ED discharge and identify areas for improvement. The naloxone dispensing rate will then be reassessed after implementation of improvement strategies. **Outcomes:** Prospective data will be collected following process improvement implementation. Effectiveness of the intervention will be determined by comparing the pre- and post-process improvement data regarding dispensing naloxone to patients in the ED determined to be at-risk.

Medication Utilization for Managing Agitated Patients Based on Implicit Bias

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Type: Work in Progress. **Background:** Acute agitation is a common presentation in the Emergency Department (ED), where a recent study found that up to 2.6% of ED visits resulted in significant agitation - 84% required physical restraints and 72% required sedation. Treatment guidelines recommend managing agitation by verbal de-escalation, followed by medication, where oral is preferred and intramuscular (IM) injectables are used as a last resort. Studies have found differences in the management of agitation based on race and ethnicity, including frequency of code activation requiring security personal and use of physical restraints. Studies evaluating the differences in medication administration for treating acute agitation in the ED based on race/ethnicity are more limited. **Objective:** This study seeks to evaluate differences in the total amount of involuntary medication administered for acute agitation in the Riverside University Health System Medical Center (RUHS-MC) ED based on race/ethnicity **Methods:** This study is a retrospective chart review comparing white, non-Hispanic patients and non-white and/or Hispanic patients. Study subjects were identified using electronically generated reports of IM injection orders for antipsychotics or benzodiazepines in the ED from October 1, 2020 to September 30, 20211. Subjects were included if they were adults aged 18 years or older and received at least one administration of an antipsychotic or benzodiazepine for agitation within 24 hours of presentation. Key exclusion criteria included age less than 18 years and administration of an antipsychotic or benzodiazepine for an indication other than agitation. A sample size of 46 patients in each group (white non-Hispanic and non-white and/or Hispanic) was chosen to give a power of 80% to detect a risk difference of 0.25 with a one-sided 0.05 level of significance. A χ^2 test of associations will be used to analyze the data. **Outcomes:** The primary outcome is total antipsychotic and benzodiazepine doses within 24 hours (in chlorpromazine equivalents and lorazepam equivalents, respectively). Key secondary outcomes include antipsychotic and benzodiazepine doses used for first administration, incidence of repeat administration within 24 hours, time to next administration, time between code initiation and medication administration, number of repeat administrations within 24 hours, and use of physical restraints.

Naloxone Prescribing and Clinical Pharmacy Specialist Interventions at the Cincinnati Veterans Affairs Medical Center (CVAMC)

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Type: Work in Progress. **Background:** On February 24, 2021, the Department of Veterans Affairs (VA) issued a memorandum encouraging naloxone distribution to veterans with Opioid Use Disorder (OUD). The memorandum reported an increase in deaths by opioid overdose observed during the COVID-19 pandemic. VA facilities were tasked to increase opioid overdose education and naloxone distribution by twenty-five percent prior to December 31, 2021. In response to the memorandum, a Substance Use Disorder (SUD) Clinical Pharmacy Specialist (CPS) at the Cincinnati Veterans Affairs Medical Center (CVAMC) began reviewing a risk mitigation dashboard to identify patients with OUD to educate and provide naloxone. **Objectives:** The primary objective was to compare the distribution of naloxone by the SUD CPS to other CVAMC prescribers prior to and after publication of the VA national memorandum. Data from October 1, 2019 through May 28, 2020 was compared to that from February 24, 2021 through October 22, 2021. The secondary objectives included capturing workload by the SUD pharmacist and reviewing naloxone prescribing characteristics in patients with documented overdose. **Methods:** Identification of patients with OUD and information regarding naloxone prescriptions (date, type of prescriber, practice setting) was collected utilizing the VA's electronic medical records system. Data was validated by chart review then sorted using Microsoft Excel to quantify and analyze the objectives. Additional information including documented and undocumented workload time spent by the SUD pharmacist was obtained via chart review. Information was also gathered from Suicide Behavior and Overdose Reports to determine naloxone prescribing characteristics in documented overdoses. Patients were included in the primary objective if they received a naloxone prescription within date ranges and had diagnosed OUD. Only prescriptions ordered by the SUD CPS were used to analyze workload by the SUD CPS and excluded newly initiated methadone patients. Descriptive statistics will be utilized to summarize results. **Outcomes:** The percentage of CVAMC naloxone prescriptions issued by the SUD CPS more than doubled from 20.4% (n = 48) in the time prior to the VA national memorandum to 52.4% (n = 243) in the time period following. Total naloxone prescriptions by all providers increased by 150.3%. Final data validation and analysis of secondary outcomes currently in process.

Nudging Behavioral Changes: Evidence from Healthy Eating Challenge

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Type: Work in Progress. **Purpose:** Nearly one quarter of Americans skip breakfast daily. Among college students, almost half of college students do not regularly eat breakfast. Skipping breakfast is associated with negative health outcomes and poor academic performance. This study investigates the effects of a structured breakfast program integrating education, self-reflection, and community support to promote behavioral change. **Methods:** This study consists of three cohorts with Rutgers University students, staff, and faculty. In the 10-day Healthy Eating Challenge, created by the nonprofit, Eating for Your Health, participants completed pre- and post-surveys and evaluated how they felt after eating meals from provided recipes. The facilitators met with the participants on days 1, 5, and 10 in a group setting to discuss assigned readings and experiences. Data was analyzed by STATA. **Results:** Among 54 participants in Cohorts 1 (37) and 2 (17), 86.38% and 87.50% were confident in changing their eating habits by improving food varieties (83.78% vs 52.94%), increasing fiber consumption (45.95% vs 29.41%), and preparing food in batches the night before (62.16% vs 47.06%). Approximately 52.94% of participants in Cohort 2 planned to improve meal balance. After the Challenge, participants in Cohort 2 indicated facilitating factors for behavioral change were nutritional knowledge (68.42%), cooking skills (68.42%), the program itself (56.25%), health considerations (31.25%), and community support (6.25%). Barriers included time constraint (87.50%), affordability (31.25%), poor cooking skills (18.75%), and inadequate facilities (12.50%). Comparing the pre- and post-survey data for Cohort 2, participants became more ready for behavioral changes/modifications (73.68% vs 87.50%) and less likely to consider cooking skills as a barrier (36.84% vs 18.75%) afterwards. The concept of "How You Feel Is Data" (self-assessment journaling), was considered helpful in facilitating behavioral changes/modifications by 89.19% of participants in Cohort 1. **Conclusion:** A structured and integrated breakfast challenge program is helpful in nudging participants for behavioral changes/modifications. Programs should address potential barriers to change and engage participants in journaling. For Cohort 3, the experience will extend throughout the semester so participants can reflect on their goals and SMART objectives and leverage strengthened community support for improved accountability and adjusted mindset towards food.

Optimizing Collaboration Among Clinical Pharmacy Specialists and Behavioral Health Providers in the Primary Care Setting

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Type: Work in Progress. **Background:** According to the National Institute of Mental Health, nearly one in five adults living in America are affected by a mental health condition, and less than half receive any type of treatment. While specialty mental health services are warranted for some, many patients can be effectively managed within the primary care setting, especially as referral wait times for psychiatry can be a potential barrier. This project will be conducted within an integrated health system, which includes over 45 primary care clinics. Each clinic is highly variable in the collaboration between clinical pharmacy specialists (CPS) and behavioral health providers (BHP) for mental health management. Clinical pharmacy specialists work under clinical practice agreements with established protocols in place for several chronic disease states including co-management in the treatment of depression and anxiety. There is a paucity of evidence for the impact of collaborative teams that include clinical pharmacists on mental health outcomes when looking at medical home practice models. Standardizing practice across clinics and optimizing the roles of the CPS and BHP will increase collaboration leading to improved patient care and access to treatments. **Objectives:** (1) Identify current state of collaborations between CPS and BHP to guide standardization within primary care clinics. (2) Describe a best practice model for CPS and BHP collaboration and provide trainings to enhance coordination and efficacy of teams. **Methods:** This quality improvement project will include a large medical group in the Pacific Northwest. Given there are several primary care clinics, both CPS and BHP teams will be surveyed to determine current collaborations of mental health management within each clinic. Analysis of survey results will determine which clinic(s) will be evaluated further based on the strength of collaborative interventions ranging from strong to minimal. Results will be summarized, and trainings will be given to both teams at monthly meetings and small groups if needed to optimize workflows. **Significance of Project:** This study aims to describe current best practices and report findings to optimize the collaboration between CPS and BHP teams in mental health care.

Paliperidone Palmitate and Prazosin-Induced Retrograde Ejaculation in a Psychiatrically Stabilized Patient with Bipolar I Disorder

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Type: Work in Progress. **Background:** Retrograde ejaculation (RE) is a disorder that can result from medications that possess alpha-1 adrenergic blockade capabilities such as prazosin and paliperidone. This case report describes a 48-year-old male with a 17-year history of bipolar I disorder with psychotic features and more than 10 related hospitalizations. The patient is now stabilized on a once monthly paliperidone palmitate injection with successful management of psychotic and mood symptoms. This patient recently reported symptoms related to RE which he indicates were initially recognized 3.5 years into treatment but has never been addressed. Clinicians are faced with addressing symptom burden while maintaining patient stabilization as the causative agent is often the same medication. For many clinicians, once a patient is stabilized on a regimen, great efforts are made to maintain that stability. **Objectives:** (1) Evaluate literature to determine treatment options previously explored for RE. (2) Obtain pertinent labs to characterize and correlate their involvement in the patient's presentation. (3) Use pharmacist-driven intervention strategies to ameliorate the patient's symptoms of RE while maintaining the patient's sustained psychiatric stability. (4) Monitor patient for safety, tolerance, and success of treatment modalities used. (5) Develop treatment algorithm for future management of patients with RE. **Methods:** The patient is scheduled to meet with a clinical pharmacist practitioner at regular intervals to discuss treatment options, including tapering prazosin to reduce alpha-1 blockade. Pertinent labs (prolactin, luteinizing hormone, thyroxine, testosterone, thyroid stimulating hormone, cortisol, follicle-stimulating hormone, and comprehensive metabolic panel) will be obtained to characterize and correlate potential involvement. The patient will be monitored for safety, tolerance, to changes in their medication regimen as well as patient-perceived success/failure of those changes. A formal case report will be written at the culmination of this case to help characterize the potential causes and impact of an infrequently reported sexual side effect. **Outcomes:** Results of this case will be presented during the AAPP annual meeting in April 2023. Results from this case and a completed treatment algorithm will be presented to the psychiatry department for review and consideration for implementation in local clinical practice guidelines.

Pharmacist Impact on Administration Intervals and Appropriate Titration of Long-Acting Injectable Antipsychotics (LAIAs) Through Monitoring, Alerts, and Interventions

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Type: Work in Progress. **Background:** Long-acting injectable antipsychotics (LAIAs) are a pharmacotherapeutic treatment option for individuals with schizophrenia, schizoaffective disorders, and bipolar disorders. The drug manufacturers specify the administration schedules for each LAIA agent to maintain their efficacy at steady-state concentrations. When dosing schedules are not maintained, clinicians are recommended to follow a stepwise approach for subsequent administration(s), considering patient and drug-specific factors. A facility medication use evaluation (MUE) was performed that reported the following data during a 1-year study period: 12.4% of patients prescribed a LAIA missed $>$ 1 administration with a total of 25 incidences of missed doses identified. From the 25 incidences, 14 (56%) missed doses warranted an intervention for adjustment in therapy but was only performed in one case (7.1%). Findings from this evaluation have led to increased communication amongst the mental health registered nurses regarding need for review of missed doses and recommendations made by pharmacists. **Objectives:** (1) Provide education and increase pharmacist direct intervention for missed LAIA dose recommendations. (2) Assess if pharmacist interventions increased frequency of completion of missed dose recommendations. **Methods:** Formal education will be provided to nursing staff, providers, and/or scheduling teams. This education will review the importance of implementing clinical actions in cases of missed dosing intervals of LAIAs. The electronic medical record (EMR) will be used to identify patients prescribed LAIAs within the health care system. The facility LAIA Dashboard will be reviewed monthly to identify cases of missed clinic appointments and/or dose administrations of LAIAs, in addition to receiving alerts via EMR to coordinate patient care with providers, nurses, and scheduling staff for missed doses of LAIAs. Recommendations will be documented within the patients' medical records with providers and clinical staff tagged to the note. **Outcomes:** The number of LAIA missed doses, dose recommendations made, and recommendations completed will be collected. Data will be collected from July 2, 2021 through December 5, 2022, when formal education was provided. Data will be collected from December 6, 2022 through June 1, 2023 and will be analyzed for changes in frequency of pharmacy recommendations and recommendations completed.

Pharmacist Impact on Expanding Naloxone Access and Distribution to Patients with Stimulant Use Disorders via Targeted Secure Messaging

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Type: Work in Progress. **Background:** Naloxone is a medication that has proven to reduce the rates of opioid overdose mortality. Although naloxone works to reverse the effects of opioid overdose, other substances may be contaminated with opioids, which increases the risk of opioid overdose to knowing or unknowing consumers. In recent years, the rates of death related to stimulant use have increased, which is primarily related to co-involvement with opioids. Considering this and the overall increasing rates of opioid overdose mortality, it is critical to expand naloxone access and education to those with stimulant use disorders. **Objective:** The purpose of this project is to assess the feasibility and success of using secure messaging to expand naloxone access and distribution to veterans with stimulant use disorders. **Methods:** Veterans with stimulant use disorders who are candidates for a naloxone kit will be identified through an online dashboard database. Of those identified, all veterans with access to secure messaging will be contacted. In this initial message, veterans will be offered a naloxone rescue kit and will be provided with a link to a naloxone educational handout. For all veterans who respond and request a kit, naloxone and additional educational materials will be sent and documented in the medical record. For veterans who decline a naloxone kit, it will be documented in the medical record. **Outcomes:** The total number of patients contacted will be recorded. Of these, the number of those who read and those who did not read the secure message will be collected. Of those who respond, the total number of patients who request a naloxone kit and those who decline one will be documented. If available, the reason for decline will be noted. Lastly, the total number of naloxone kits distributed as a direct result of this service will be documented.

Pharmacist-Based Medication Reconciliation for High-Risk Community Patients

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Type: Work in Progress. **Background:** ACT (Assertive Community Treatment) Teams are designed to reach out to patients that are at a high-risk of hospitalization due to medical conditions and social challenges. Due to the decentralized health care system in the United States, it can be challenging to obtain accurate information from patients who may be poor historians or struggle with communication. Ensuring that patient medications are recorded accurately is a crucial aspect of care transitions that can be the source of potential medication errors if not thoroughly investigated. Pharmacists can help bridge the care gap between inpatient and outpatient settings to reduce potential for medication omissions or alterations based off of an inaccurate medication list in this critical patient population. **Objectives:** (1) Analyze potential medication discrepancies for high-risk behavioral health patients with frequent hospitalizations. (2) Highlight the benefits of pharmacist involvement with the ACT Team to improve patient outcomes by providing accurate medication history while hospitalized and reducing frequency of hospitalization post-discharge. **Methods:** Patient information is submitted to the clinical pharmacy team by the ACT Team nurse when an ACT patient is hospitalized. The pharmacist will then contact the appropriate hospital on behalf of the ACT Team and perform a medication reconciliation to ensure the inpatient records are accurate, including upcoming long-acting injections that may be due while the patient is hospitalized. After completing the current medication reconciliation, the clinical pharmacist will perform a retrospective chart review within the last two years utilizing Epic Ochin EHR and Clinisync to evaluate frequency of previous hospitalizations as well as accuracy of medication lists during hospitalizations. The pharmacist will also follow-up with the patient after discharge to discuss medication changes and adherence to care. **Outcomes:** We will report basic patient demographics (age, race, diagnosis), precipitating factors to hospitalization, frequency of hospitalizations prior to pharmacist intervention, medication discrepancies discovered during the reconciliation process, and length of time patient avoids hospitalizations for psychiatric concerns post-pharmacist intervention.

Pharmacist-Conducted Comprehensive Psychiatric Medication Reviews of Hospitalized Psychiatric Inpatients

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Regions Hospital, Saint Paul, MN

Type: Work in Progress. **Background:** One of the challenges facing patients with mental illness is receiving care in a fragmented healthcare system. This can lead to repetitive trials of psychiatric medications that may be ineffective or intolerable. Pharmacist-conducted medication reviews have been shown to be an effective strategy for improving psychiatric patients' current medication regimens. A comprehensive review of all psychiatric medications a patient has trialed by a pharmacist has the potential to further improve outcomes. **Objectives:** (1) Implement a

new pharmacy service where pharmacists create a document that entails all psychiatric medications trials and a psychiatric medication timeline for hospitalized psychiatric inpatients. (2) Evaluate if this service impacts hospital length of stay and if it is valued by psychiatric providers. **Methods:** This prospective, quality improvement project will be conducted on an acute 120-bed psychiatry unit of a large academic hospital between November 7, 2022 and February 6, 2023. All patients who had a comprehensive psychiatric medication review (CPMR) will be included. To be eligible for a CPMR a patient must meet one of the following criteria: (1) $\geq$ 3 psychiatric hospital admissions in the past year; (2) $\geq$ 6 psychiatric medication trials; (3) $\geq$ 3 allergies or intolerances to psychiatric medications. CPMRs will provide details on all psychiatric medications trialed, including the maximum dose, length of therapy, therapeutic response, reason for discontinuation, adverse effects, and concomitant psychiatric medications. Each CPMR will also contain a psychiatric medication timeline detailing medication changes and psychiatric hospitalizations. Length of stay for patients with a CPMR will be compared to the average length of stay for the unit the patient received care on using descriptive statistics. A survey will be distributed to psychiatric providers caring for the patients who have a CPMR asking them to evaluate whether the CPMR was useful, whether the CPMR saved them time, and if the CPMR impacted their medication choices. **Outcomes:** We will report on length of stay for patients who receive a CPMR and results of the clinician survey on the value of CPMRs. We will review the opportunities and challenges for initiating this pharmacy service.

Pharmacist-Led Optimization of Discharge Medication Reconciliation for Long-Acting Injectable Antipsychotics

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Type: Work in Progress. **Background:** A previously conducted retrospective review within the health system showed discrepancies regarding long-acting injectable antipsychotics (LAIAs) in approximately 50% of licensed-independent practitioner (LIP)-conducted discharge medication reconciliations on inpatient behavioral health units. One hypothesized issue was that LAIAs were not listed as a medication to be continued upon discharge due to being ordered as a one-time dose while inpatient with no follow-up doses ordered. If the LAIA was ordered as a "placeholder" – which notifies the practitioner of a previous or future dose – but an active order is never placed, the LAIA would not appear as a medication to be continued upon discharge. Omission errors on discharge medication lists may result in missed outpatient doses, increasing risk of relapse and readmission. **Objectives:** (1) Investigate correlation between LAIA order type (one-time versus recurring doses) and LAIA continuation on LIP-conducted discharge medication reconciliations. (2) Create a Care Signature pathway publication in EPIC to standardize and optimize best practices for ordering of LAIAs. **Methods:** A retrospective review within the health system was initially conducted from January 1, 2020 to December 31, 2020 and included patients who received an LAIA during or prior to admission. Using the same population, data will be collected regarding LAIA order type and continuity of LAIAs on LIP-conducted discharge medication reconciliations. We will then work to create a Care Signature pathway publication in EPIC to optimize best practices for ordering of LAIAs. This pathway publication will imbed ordering panels that will prompt recurring dose ordering once an initial LAIA is entered. We will also include information on social work services to encourage outpatient follow-up. Following Care Signature pathway publication, a clinical pharmacist will provide education to ordering providers and pharmacists regarding electronic medical record optimizations. **Outcomes:** The project team will assess if there is a correlation between LAIA order type and frequency of LAIAs continued upon discharge. Data regarding whether the LAIA was ordered on psychiatric vs non-psychiatric units as well as data regarding specific LAIAs will be analyzed to determine if any trends exist.

Pharmacogenomic Testing in Veterans with Treatment Resistant Major Depressive Disorder (MDD)

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Veterans Affairs Palo Alto Healthcare System, Palo Alto, CA

Type: Work in Progress. **Background:** The traditional approach for treatment of depression is through trial and error, often leading to nonresponse, low remission rates, and adverse effects. One approach to improving the management of depression is through pharmacogenomic (PGx) testing. Common pharmacogenes associated with antidepressants include CYP2D6 and CYP2C19; mutations to these genes can affect the efficacy and tolerability of antidepressant medications. The goal of this project is to implement a pharmacist-driven population health initiative aimed at increasing incorporation of PGx testing at Veterans Affairs Palo Alto Health Care System (VAPAHCS) for veterans with MDD. **Objectives:** (1) Describe the implementation of pharmacist-driven population health

initiative aimed at increasing the incorporation of PGx testing in veterans with MDD at VAPAHCS. (2) Evaluate operational, clinical, and humanistic outcomes of this initiative. **Methods:** This study is a single-center prospective quality-improvement project taking place at VAPAHCS. Patients were identified through ICD-9 or ICD-10 codes relating to MDD on two or more encounters in the past two years, one or more hospitalization in the past two years, or active problem on electronic health medical record (EHMR) problem list and prescribed at least three different antidepressants between September 1, 2021 and August 31, 2022. Patients were excluded if they had prior PGx testing and/or history of liver or allogeneic bone marrow transplant. Providers of eligible patients were contacted and an academic detailing session was conducted. Provider surveys were sent after each session to assess comfort with use of PGx testing. Data collected included number of PGx tests ordered, number of patients with PGx test ordered, number of actionable results, number of actionable results resulting in adjustment to therapy, and total number of patients in each specific gene mutation. **Outcomes:** The primary outcome includes the number of academic detailing sessions completed with providers, provider comfort with educating patients about PGx testing, ordering PGx testing, and likelihood of ordering more PGx testing. Secondary outcomes include number of PGx testing ordered, number of actionable results, number of actionable results resulting in adjustment to therapy, follow-up after actionable result, and total number of patients in each specific gene mutation.

Pharmacogenomics (PGx) in the Electronic Health Record (EHR)

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Type: Work in Progress. **Previously Presented:** University of Minnesota Clinical and Translational Science Institute 2022 Annual Poster Symposium. September 2022. **Background:** About one in five US adults experience mental illnesses with the estimated prevalence of any mental illness of 21.0% in all US adults. Clinically, about 50% of patients initially respond to first-line pharmacologic treatments for common mental health diagnoses such as depression and anxiety. Pharmacogenomics (PGx) is an evolving component of precision medicine that utilizes genetic information to assist with drug selection or dosing approaches. There are currently approximately 40 commercial laboratories in the US that offer PGx tests for clinical use which provide guidance for medications used in mental health. These tests may be expensive and have limited insurance coverage. The utility, effectiveness, and equity of the implementation of PGx in non-specialty health systems is unclear. **Objectives:** To establish a database and examine the demographic and clinical characteristics of mental health patients receiving PGx testing across a large health system to evaluate the equity of PGx testing. **Methods:** The University of Minnesota Best Practices Integrated Informatics Core (BPIC) data shelter was used to examine the clinical and demographic characteristics within the electronic health record (EHR) of 1 638 patients receiving a PGx test from 2013-2019. Demographic and clinical characteristics including diagnoses and medications were collected. **Results:** The majority of patients that received PGx testing were female (63.6%), over the age of 18 (83.2%), white (88.5%), diagnosed with anxiety (61.6%) or depression (59%), and taking a medication for mental health (81.5%). Additionally, 63% of participants were taking medications with PGx guidance from the FDA or Clinical Pharmacogenomic Implementation Consortium (CPIC). Future analyses will compare these characteristics with patients who did not receive PGx tests where we hypothesize lower test utilization in non-white mental health populations compared to white patients. **Discussion:** PGx utilization in the EHR provides opportunities to assess the equity of implementation as a clinical support decision tool and to determine relationships with medication efficacy, safety, and adherence. Ethical considerations include accessibility of PGx tests considering cost, knowledge, and genetic data storage and accessibility.

Piloting an Outpatient Pharmacy Mental Health Consultation Service

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Type: Work in Progress. **Background:** Pharmacotherapy is pivotal in treating patients with psychiatric disorders; however, its success can be limited by adverse effects, inadequate monitoring, drug-drug and drug-disease state interactions, and difficulties with adherence. With the demand of mental health services continuing to increase coupled with the shortage of mental health providers, mental health clinical pharmacy practitioners are optimally positioned to aid in the management of patients on high-risk medications by providing medication management and consultation in the outpatient mental health clinics. **Objective:** To evaluate the benefit of a pharmacist consultation service and provider acceptability of this pilot service within outpatient mental health clinics. **Methods:** This quality improvement project included adult veterans who had an outpatient pharmacy mental health consult placed by a mental health provider between September 1, 2022 and March

1, 2023. Consulting services included: medication monitoring, medication evaluations, and drug information questions. The mental health pharmacy resident dedicated up to four hours per week for responding to consults and seeing patients in clinic. The initial consultation involved a chart review through a mental health pharmacy consult note template which included information from pertinent past progress notes, past medication trials, adherence, past medical and psychiatric history, social history, and labs. The pharmacist then provided recommendations on pharmacotherapy changes, monitoring parameters, or literature review of relevant findings. If appropriate, a follow up clinic visit was scheduled with the patient to provide education or future monitoring. Markers used to evaluate effectiveness of the service were number of consults placed, acceptance of recommendations, and provider feedback. **Outcomes:** Demographic information (age, gender, race, mental health diagnosis) will be reported. Primary data points will include reason for the consult, pharmacist intervention, and acceptance of recommendations. Secondary outcomes will include medication(s) involved, problem(s) identified, expected outcome of intervention, and time spent completing the consult.

Prevalence of and Factors Associated With Serotonin Norepinephrine Reuptake Inhibitors (SNRIs) and Tricyclic Antidepressants (TCAs) Concurrent Prescribing Among Texas Medicaid Adults

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Type: Work in Progress. **Background:** Serotonin norepinephrine reuptake inhibitors (SNRIs) and tricyclic antidepressants (TCAs) are pharmacologically described as antidepressants with dual serotonergic and noradrenergic reuptake inhibition. While the degree of reuptake inhibition, pharmacodynamic, and pharmacokinetic properties differ, both drug classes result in increased serotonin and norepinephrine and modulate similar neuronal pathways. As such, these drug classes are used to treat similar disorders including depression, anxiety disorders, and pain syndromes. Several studies have shown an increased risk of adverse effects associated with psychotropic polypharmacy. Limited evidence exists supporting the concurrent use of SNRIs and TCAs and this type of polypharmacy is not recommended. Additionally, the potential for significant drug-drug interactions exists due to overlapping mechanisms of action and risk of cytochrome P450-mediated alterations in drug metabolism. Despite this data, SNRIs and TCAs are frequently prescribed together, but details surrounding potential rationale for use is unknown. By describing clinical trends associated with co-prescribing of SNRIs and TCAs, this study provides additional insight into prevalence and perceived uses of concurrent SNRI and TCA therapy. Results from this study may help inform future prescribing practices, encourage adverse event assessment, and minimize polypharmacy. **Objective:** Describe prevalence, demographic and clinical characteristics, and prescribing patterns among adult Texas Medicaid concurrent SNRI and TCA users. **Methods:** This IRB-approved real-world retrospective study using Texas Medicaid claims data identified patients concurrently prescribed SNRIs and TCAs between January 1, 2012 and December 31, 2021. Inclusion criteria were Texas Medicaid adults (18-63 years); continuously enrolled in Medicaid for 18 months (6 months pre-index to 12 months post-index); and filled concurrent prescriptions for both an SNRI and TCA (overlap for at least 30 days). Demographics, diagnoses, and types of SNRI/TCA combinations will be collected. Descriptive statistics will be used to address the study objective. **Outcomes:** We will describe the prevalence of SNRI and TCA concurrent prescribing among adult Texas Medicaid patients. We will also report demographic (age, race, gender) and clinical characteristics (diagnosis, dose, duration, and type of SNRIs and TCAs).

Protocol for a Multi-Site Study Implementing a Pharmacist-Integrated Collaborative Model of Medication Treatment for Opioid Use Disorder in Primary Care

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Type: Work in Progress. **Background:** Pharmacists are uniquely positioned to expand the provision of medication treatment for opioid use disorder (OUD) in the US. A Pharmacist-Integrated Medication treatment for OUD clinical model (PrIMO) was developed over 1.5 years and launched in 2016 at a federally qualified health center serving approximately 70 000 patients in Maine in response to the overdose crisis. In PrIMO, the co-located pharmacist becomes integrated within the primary care team to provide medication for OUD (MOUD) and patient counseling reflective of an ambulatory care pharmacy practice. Within one year, providers reported PrIMO helped alleviate

concerns about MOUD, resulting in an increased number of MOUD prescribers and patients. **Objectives:** The National Institute on Drug Abuse (NIDA) Drug Abuse Treatment Clinical Trials Network study aims to evaluate the feasibility, acceptability, and impact of implementing the PrIMO collaborative care model across four diverse primary care sites in four US states via a longitudinal mixed-methods research design. **Methods:** The Stages of Implementation Completion (SIC) is the primary outcome measure to assess feasibility of PrIMO implementation activities. This study will combine both qualitative interview data from patients with OUD, primary care providers, pharmacists, and clinic staff with quantitative survey and electronic health record (EHR) data to explore acceptability and impact of the model as the secondary outcome. Implementation facilitation will support model adoption. **Originality:** Data from clinical trials suggest collaborative care models can expand treatment capacity and effectively treat OUD in primary care. Although studies have engaged pharmacists in dispensing MOUD, few studies have evaluated collaborative care models in which pharmacists are an active, integral part of a primary care team offering OUD care. SIC, survey, interview, and EHR outcomes evaluated holistically may help primary care practices decide whether to adopt PrIMO to expand access to MOUD. **Significance:** The opioid crisis calls for evidence based MOUD models of care that increase treatment capacity in primary care. The PrIMO model has high potential for implementation success and improved primary care patient OUD treatment experience and clinical outcomes across the US. Results from this study will inform a larger experimental design that seeks to evaluate best ways to scale-up this model across the nation.

Quality Improvement for Metabolic Monitoring of Children and Adolescents Prescribed an Antipsychotic

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Type: Work in Progress. **Introduction:** The consensus guideline by the American Psychological Association recommends routine metabolic monitoring for anyone prescribed a scheduled antipsychotic. Primary Children's Hospital (PCH) offers both inpatient and outpatient psychiatry services. Metabolic monitoring rates are exceptionally high across the pediatric behavioral health service line, except in the outpatient setting. In 2021, only 36% of these patients had metabolic monitoring documented in the last year. According to the most recent National Committee for Quality Assurance report, this is comparable to the national average of 32%. Currently, prescribers are primarily responsible for metabolic monitoring. However, when an antipsychotic refill is requested, a pharmacist may also screen the patient. A fasting lipid panel, and fasting blood glucose or A1C can be ordered under a Collaborative Practice Agreement (CPA). Beyond these measures, there is no standard process to ensure metabolic monitoring is completed at PCH's behavioral health outpatient clinics. **Objectives:** (1) Develop, implement, and evaluate a new outpatient metabolic monitoring process for children and adolescents prescribed a scheduled antipsychotic. (2) Increase the annual rate of metabolic monitoring to an entry of 45% one year after the new process is implemented. **Methods:** This IRB-exempt quality improvement project includes children and adolescents prescribed a scheduled antipsychotic after September 30, 2022. Annual metabolic monitoring rates will be compared to the previous year using a preexisting data dashboard. Patients who have a blood glucose or A1C, fasting lipid panel, body mass index, and blood pressure recorded in the last year at the time of outpatient encounter, fulfill the monitoring requirements. After collaborating with the Continuous Improvement team at Intermountain Health, the revised process consists of (1) screening Electronic Health Records one week before office visits; (2) utilizing the metabolic monitoring CPA; (3) contacting prescribers and caregivers when monitoring is required; (4) updating the dashboard to capture data metrics more accurately; and (5) creating a list of outpatient laboratory locations. **Outcomes:** We will report the (1) demographics of those prescribed a scheduled antipsychotic by PCH's behavioral health outpatient clinics; (2) percentage of metabolic monitoring documented within the last year; and (3) most common barriers to complete metabolic monitoring.

Retrospective Review of Racial Disparities in Treatment of Agitation in an Academic Medical Center

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Type: Work in Progress. **Background:** Violent and aggressive events cause significant psychological and physical harm to patients and healthcare providers. Measures to prevent violence through restrictive practices are linked to post-traumatic stress disorder, serious injury, and patient deaths. Previous studies illustrate racial disparities in treatment of agitation for Black and Hispanic/Latino populations, who are frequently viewed as being more hostile and aggressive. More frequent use of invasive measures such as seclusion and restraint are seen in these patient populations. It is important to identify whether any demographics, such as age, race, or ethnicity impact the likelihood of restrictive practices so strategies can be devised to minimize these disparities. **Objectives:** (1) Analyze

demographic information of patients who are placed in restraints or seclusion during admission compared to those who are not placed in restraints or seclusion. (2) Investigate the appropriate use of restraint and seclusion in patients experiencing agitation. **Methods:** This Institutional Review Board approved retrospective chart review will include adult patients who were admitted to University of Cincinnati Medical Center (UCMC) psychiatry services. Patients will be queried for the time frame March 1, 2022 through November 1, 2022. Characteristics and interventions will be evaluated for patients who had an episode of agitation. An episode of agitation is defined as an agitation score $\geq$ 10 on a facility-developed scoring tool. Demographic information (age, gender, race, height, weight, BMI) will be collected. Other pertinent data to be collected include the diagnosis at time of admission, agitation score, time period between recorded agitation score and intervention, and type of intervention (pharmacological, restraint, or seclusion). Descriptive statistics and regression models will be performed to examine factors associated with likelihood of restraint or seclusion during an agitation event. **Outcomes:** We will report characteristics and interventions for patients who had an episode of agitation. Factors such as age, race, diagnosis, substance use, and connection to outpatient services will be considered separately and in combination to identify patient groups who are more likely to receive a restraint or seclusion intervention. This information will be used to develop education for staff surrounding implicit bias and racial disparities in treatment of agitation.

Self-Stigma of Depression Among Pharmacy Students

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Type: Work in Progress. **Background:** Approximately one in four pharmacy students experiences symptoms of depression while earning their degree. Being in such a rigorous professional program, these pharmacy students may view their experience with depression as negative or shameful. The Self-Stigma of Depression Scale (SSDS) was designed to assess the extent to which a person holds stigmatizing attitudes towards themselves in relation to having depression. It is a 16-item scale with four subscales: shame, self-blame, social inadequacy, and help-seeking inhibition. Responses to the self-stigma items are measured on a five-point scale (ranging from one 'strongly agree' to five 'strongly disagree'). Items are coded so that a higher score indicates greater self-stigma. At Belmont University College of Pharmacy, depression is covered in the third year of the curriculum. Because of this, we hypothesize that as students progress through the curriculum, particularly in the third year, they will have a decreased depression self-stigma score. **Objectives:** (1) Analyze the difference in self-stigma of depression scores of P1 and P2 students compared to P3 and P4 students. (2) Identify additional factors that may contribute to students' depression self-stigma scores. **Methods:** This will be an anonymous, 15-minute survey using Qualtrics. Participants must be at least 18 years old and a student at Belmont University College of Pharmacy (BUCOP). Students at BUCOP will be sent an email with an invitation to participate in a survey. Additionally, participants will be recruited through social media. The first section of questions will be used to assess the participants' eligibility and collect demographic information. After completing the demographic questions, the student will be able to move on to the self-stigma of depression questions. For each question, students will be asked to respond with how they would feel or think of themselves if they were depressed. Students will indicate strongly agree, agree, neutral, disagree, or strongly disagree with each statement. A higher score indicates a higher self-stigma. A participant may refuse to answer any question that they are uncomfortable answering. **Outcomes:** We will report demographic variables, SSDS scores for P1/P2 vs P3/P4 as well as additional correlations between demographic variables and SSDS scores.

Standardization of Long-acting Injectable Antipsychotic Documentation at a Veterans Affairs Healthcare System

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Type: Work in Progress. **Background:** Long-acting injectable antipsychotics (LAIA) have been established as one of the most effective treatment options for patients with schizophrenia, bipolar disorder, and related disorders. Long-acting injectable antipsychotics have been shown to provide advantage over oral antipsychotics in symptom reduction, prevention of relapse, and decreased rate of hospitalization. At VA Connecticut Healthcare System (VACHS), the major drawback to the use of these agents is related to inconsistent documentation of medication administration across inpatient and outpatient clinics. Opportunities exist from a procedural standpoint to standardize the documentation of these medications to prevent medications errors. **Objectives:** (1) Identify the current LAIA documentation procedures across different inpatient and outpatient clinics at VACHS. (2) Standardize documentation between clinics to improve accurate capture of injection date, lot number, and medication given. **Methods:** This quality improvement effort will begin with a retrospective chart review of all LAIAs given between July 1, 2021 and June 30, 2022. This chart review will include any patient who had received two or more injections of long-acting antipsychotics and has a documented diagnosis of schizophrenia, schizoaffective disorder, or bipolar disorder. This review will not include

patients who received a LAIA from a non-VA provider. This chart review will be used to collect note titles and documentation patterns between clinics. Once this data is collected, a standardized note title and template will be developed for use in these clinics. Education on the new note template will be provided to prescribers, nurses, and pharmacists. After these changes are implemented, a second retrospective chart review will be completed to monitor adherence to the new template. At the time of the second review, a survey will also be distributed to collect feedback for continue improvement on the documentation process. **Outcomes:** The change in documentation patterns will be analyzed and reported for presentation. Any feedback and additional changes will also be included as well as adherence rates to new documentation procedures.

Successful Transition of Patients Referred to a Hospital-Affiliated Long-Acting Therapy Clinic After Inpatient Hospital Stay: A Transitions of Care Analysis

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Memorial Regional Hospital, Hollywood, FL

Type: Work in Progress. **Background:** Antipsychotic medications serve as the primary pharmacologic treatment for schizophrenia and associated psychotic disorders. Long-acting injectable (LAI) antipsychotics play a major role in medication adherence. At a large, non-profit hospital, patients are often initiated on LAIs while admitted to the psychiatric unit and are referred to the Long-Acting Therapy (LAT) clinic upon discharge. Managing transitions effectively between the hospital and non-acute setting are essential to ensure continuity of care and prevent relapses and involuntary readmissions to the hospital. As LAIs continue to gain popularity and referrals to the LAT clinic increase, it is important to assess retention rates and identify possible barriers to treatment. **Objectives:** The primary objective is to identify the number of patients who are successfully transitioned, defined as at least one clinic visit, to the long-acting therapy clinic and the number of patients lost to care after inpatient hospital stay. The secondary objective is to identify potential barriers to continuation of long-acting therapy treatment in an outpatient setting. **Methods:** This retrospective analysis will include the description of the LAT clinic at a large, non-profit hospital and the number of patients discharged from the hospital on a long-acting injection and successfully transitioned to the LAT clinic. The analysis will also include potential barriers to continuation of therapy. Data to be collected include name of LAI, whether patient was successfully transitioned to the clinic, and reason for unsuccessful transition if patient is lost to care. Data for this study will be collected on patients discharged on an LAI from Memorial Regional Hospital between October 1, 2022 and December 31, 2022. Patients will be excluded if they are already established with the LAT Clinic or another administering facility. Descriptive statistics will be utilized to quantify the number of patients who are successfully and unsuccessfully transitioned to the LAT clinic. **Outcomes:** Outcomes to be assessed include the number of patients treated at a large, non-profit hospital psychiatric unit discharged on an LAI, number of patients successfully transitioned from the inpatient psychiatric unit to the LAT clinic, and reasons for transition failures and frequency of each.

Systematic Literature Review of the Impact of Psychiatric Pharmacists

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Type: Work in Progress. **Background:** There is a wealth of evidence regarding pharmacist practices and their impact on individuals living with psychiatric disorders. Pharmacists practicing across a wide variety of healthcare settings with a focus on psychotropic medication management significantly improved patient-level outcomes, such as medication adherence, disease control, and avoidance of hospitalization. Review articles published in the Mental Health Clinician highlight the impact of psychiatric pharmacists in improving medication-related outcomes. Additionally, interim results of this project were presented as posters at CPNP 2021 and CPNP 2022. It is valuable to identify historical and recently published literature to document the litany of currently available outcomes data on a continuous basis. **Objectives:** The purpose of this project is to identify, review, and evaluate primary literature that highlights the value of psychiatric pharmacists as part of the health care team in improving medication-related outcomes using the PubMed database. **Methods:** A systematic search of literature published from January 1, 1961 to December 31, 2022 was conducted using PubMed due to its linear and systematic search process. Publications describing patient-level outcome results associated with pharmacist provision of care to individuals living with psychiatric disorders or in relation to psychotropic medications will be included. Literature that contained the following outcome measures was included: treatment response, adverse outcomes, resource utilization, satisfaction/attitude/adherence, retention/referral, or cost, medication, or time-based measures. The search excludes articles published in a language other than English; pain

conditions without psychiatric comorbidity; lacking an active interventional role by a pharmacist; only describing training exercises, simulations, or changes in perceptions/attitudes; limited to economic evaluations, commentary, or feasibility; review articles; or only reporting numbers or types of pharmacist interventions without associated patient-level outcomes. **Outcomes:** We will report on literature describing patient-level outcome results associated with pharmacist provision of care to individuals with psychiatric disorders or in relation to psychotropic medications published from January 1, 1967 to December 31, 2022. A summary of study design and outcomes will be presented as an update to the poster presented at the CPNP 2022 Annual Meeting.

The Effect of Appropriate Utilization of Medications for Opioid Use Disorder (MOUD) on Length of Stay and Readmission in Patients at the Middle Tennessee Mental Health Institute (MTMHI)

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Type: Work in Progress. **Background:** Inpatient mental health treatment provides a vital opportunity to initiate or continue medications for opioid use disorder (MOUD) and address a patient's opioid use in patients with co-occurring mental health and substance use disorders. Patients who undergo withdrawal and are not started on MOUD are at an increased risk of relapse and overdose. Untreated substance use disorders may adversely affect a patient's mental health, further complicating their course of treatment and response. It is important to identify patients who may benefit from appropriate use of MOUD upon admission to ensure they receive optimal care. **Objectives:** (1) Investigate the impact of MOUD on length of stay and hospital readmission rates in patients diagnosed with opioid use disorder and another mental illness. (2) Identify potential differences in outcome based on primary admitting diagnosis and what treatment options were utilized. **Methods:** This IRB-exempted retrospective cohort study will include patients who were hospitalized with a diagnosis of opioid use disorder at admission or discharge between January 1, 2021 and December 31, 2021. The control group is patients who did not receive any MOUD while admitted. Patients under the age of 18 will be excluded. Information regarding their length of stay, readmission, primary diagnosis, and type of MOUD used will be collected. Data regarding presence of withdrawal symptoms, initial toxicology screen results, discharge diagnosis, disposition location, and treatment referrals will also be collected. Descriptive statistics, unpaired *t* tests, and Fisher's exact tests will be used to examine the significance of the findings. **Outcomes:** We will report the differences in length of stay and readmission rate between patients who received MOUD when indicated as part of their treatment and patients who did not. Primary admitting diagnosis and type of MOUD will also be considered as factors that may affect observed outcomes.

The Impact of Antiseizure Medication on Cardiac Function

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Type: Work in Progress. **Background:** Antiseizure medications are used in the treatment of seizures well as for different stages of bipolar disorder, including manic, mixed, and depressed episodes. Some of these agents, however, can also have cardiotoxic effects. For example, in March 2021, a warning for serious arrhythmias and/or death in patients with certain underlying cardiac disorders or arrhythmias was added to the labeling for lamotrigine based on previous study findings. Lamotrigine exerts its mechanism of action by blocking sodium and calcium channels and inhibiting the excitatory neurotransmitter glutamate. Antiseizure medications that are sodium channel blockers may have a role in increasing the risk of sudden cardiac death. Because of this labeling change, the use of antiseizure medications with a sodium channel blocker mechanism should be used cautiously in the absence of additional information. Antiseizure medications exert their action through various mechanisms including blockade of sodium channels, calcium channels, increased gamma-aminobutyric acid (GABA), and glutamate receptor antagonism. Although the sodium channel blockade properties of lamotrigine have been implicated in arrhythmia risk, antiseizure medications with different mechanisms of action have also been associated with various cardiac adverse effects. Antiseizure medications are prescribed chronically, and it is important to fully understand any potential adverse effects. **Objectives:** The purpose of this study is to (1) evaluate if antiseizure medications, specifically carbamazepine, felbamate, fosphenytoin, phenytoin, lacosamide, lamotrigine, oxcarbazepine, gabapentin, pregabalin, and zonisamide, impact cardiac function and (2) to determine if additional prescriptive guidance would be warranted. **Methods:** A single-center, IRB-approved, retrospective study will review 100 patients age $\geq$ 18 admitted to the inpatient setting from June 1, 2020 to July 1, 2023. Primary outcomes including cardiac adverse events as measured by ECG changes, heart rate, blood pressure, troponin, and secondary outcomes including rate of other cardiac outcomes as well as sudden death rates will be collected. **Outcomes:** Descriptive statistics and linear

regression between groups will be conducted. Results and conclusions will be presented.

The Impact of Multiple Antipsychotics in Treatment-Resistant Psychosis at a Forensic Psychiatric Hospital

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Type: Work in Progress. **Background:** Treatment-resistant psychosis (TRP) can be a debilitating condition dramatically impacting a patient's life. Antipsychotic (AP) medications can be used to treat TRP and improve the patient's quality of life and overall functioning. However, there is debate on the risks outweighing the benefits of multiple AP use in this patient population. This study will use a facility-approved assessment, the Time-Sample Behavioral Checklist (TSBC), which is a validated observational assessment designed to measure the patients' appropriate and inappropriate behavior in residential treatment facilities as well as how they spend their time. As the TSBC data will measures specific categories of the patients' behavior, it can be used to evaluate the response to the addition or discontinuation of an AP to their treatment regimen. **Objectives:** (1) Determine if adding or discontinuing an AP leads to changes in TSBC metrics. (2) Describe the frequency and type of restraints/seclusion that occurred in this population during the study period. **Methods:** This IRB-approved retrospective chart review will assess the effectiveness of adding or discontinuing an AP in a TRP patient population at a forensic hospital. Patients admitted to the hospital and who resided on Social Learning Program (SLP) units with TRP prescribed an AP for at least 16 consecutive weeks between January 1, 2015 and December 31, 2019 are included for analysis. Patients admitted to SLP wards for day/night care only are excluded. The TSBC data will be reviewed for the 12 weeks preceding and 16 weeks following the initiation or discontinuation of an AP. The specific TSBC data points that will be investigated are the rates of appropriate behavior, inappropriate behavior, and interpersonal interaction. Age, sex, race, psychiatric diagnoses, AP orders and concurrent AP medication changes will also be analyzed. Reports will be generated for the types and amounts of restraints/seclusion. Descriptive statistics will be utilized to assess the data collected. **Outcomes:** This study will report increases or decreases in the appropriateness of behavior when adding or discontinuing an AP in a patient with TRP.

The Relationship Between Opioid Overdose Death Rates and Buprenorphine Distribution to Retail Pharmacies in California in 2021

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Type: Work in Progress. **Background:** Opioid overdose deaths have increased by 181% between 2018 and 2021 and have become a leading cause of death in California. With increasing rates of overdose mortalities, adequate access to medications that treat opioid use disorder, such as buprenorphine, is important not only at the provider level but also in community pharmacies. The Drug Enforcement Administration (DEA) imposes restrictions on the distribution of buprenorphine to retail pharmacies which can have major implications on inventory and access to care. Lack of access to buprenorphine in the community has been shown to lead to poorer outcomes. No study has thus far compared buprenorphine distribution to overdose mortality outcomes. This study aims to assess if there is an association with opioid overdose rates and buprenorphine distribution amounts per zip code in the state of California. **Objectives:** (1) Evaluate the incidence of opioid-related overdose rates by zip code in California. (2) Analyze whether an association exists between opioid overdose rates and amount of buprenorphine distributed per zip code. (3) Describe demographic data of opioid-related deaths in California. **Methods:** This study is a descriptive, observational, retrospective analysis of available data. Absolute death count from opioid overdoses and demographic data from the California Department of Public Health (CDPH) will be utilized. Additionally, the DEA Automation of Reports and Consolidated Orders System (ARCOS) Retail Drug Summary Reports will be used to collect the amount of buprenorphine distributed per zip code to community pharmacies. Opioid-related deaths in California in 2021 will be included in this study. A Poisson regression will be conducted to analyze the predictive value of buprenorphine distribution on opioid overdose deaths. Demographic information, including age, gender, race, ethnicity, and education status per zip code will be described. **Outcomes:** Analysis of opioid overdose rates, amount of buprenorphine distribution, and demographics in different zip codes within the state of California in 2021 will be reported and discussed.

Efficacy of Liraglutide in Comparison to Metformin for the Management of Antipsychotic-Induced Weight Gain

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Type: Work in Progress. **Background:** Antipsychotics are the backbone of schizophrenia management and important in the management of mood disorders. Although effective, they are notoriously associated with adverse metabolic effects. Antipsychotic-induced weight gain (AIWG) has negative implications on patient health outcomes and poses major management problems for clinicians. Metformin is commonly considered first-line for the management of AIWG. Existing literature suggests that when compared to metformin, glucagon-like peptide-1 (GLP-1) agonists are superior in average weight reduction. There is increased interest for the use of GLP-1 agonists in the management of AIWG, but existing evidence for this indication is limited. This study will allow us to assess the efficacy of liraglutide in comparison to metformin for the management of AIWG in patients at the Dallas County Jail. **Objectives:** (1) Evaluate reduction in weight from baseline in patients treated with liraglutide or metformin for AIWG. (2) Evaluate change in BMI from baseline in patients treated with liraglutide or metformin for AIWG. (3) Assess change in weight and BMI in patients treated with liraglutide compared to patients treated with metformin. **Methods:** This study will be a retrospective chart review. A CIPS (Correctional Pharmacy Software) report will be generated to identify patients prescribed metformin or liraglutide for the management of AIWG. Demographics such as age, sex, race, ethnicity, baseline weight, baseline BMI, psychiatric illness, antipsychotic prescribed, antipsychotic dose, duration of antipsychotic and weight loss agent prescribed, and any dose adjustments will be documented. Safety parameters will include liver function tests, HbA1c, and any reason for therapy discontinuation. For objective (1): change in weight from baseline to follow-up will be reported for patients treated with either liraglutide or metformin. For objective (2): change in baseline and follow-up BMI will be reported for patients treated with liraglutide or metformin. For objective (3): total weight and BMI change in patients treated with liraglutide will be compared to those treated with metformin. **Outcomes:** We will report weight reduction in patients at the Dallas County Jail treated with liraglutide or metformin for the management of AIWG and analyze the efficacy of liraglutide in comparison to metformin for this indication.

Treatment Outcomes of Topiramate in Comorbid Alcohol Use Disorder (AUD) and Post-Traumatic Stress Disorder (PTSD) in Veterans

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Type: Work in Progress. **Background:** In the veteran population, comorbid alcohol use disorder (AUD) and post-traumatic stress disorder (PTSD) is common. Past research findings suggest topiramate use in patients with co-morbid AUD and PTSD improves outcomes for both conditions; however, further research is needed to fully evaluate the role of topiramate in co-morbid AUD and PTSD. **Objectives:** (1) Evaluate the number of drinks per week with topiramate use in patients with comorbid AUD and PTSD versus AUD alone. (2) Evaluate the impact of topiramate on other measures of alcohol use and PTSD (time to first AUD relapse and change in PTSD symptoms: intrusive thoughts, avoidance, negative alterations in cognition/mood, and hyperarousal). **Methods:** Patients prescribed topiramate between August 1, 2020 and August 31, 2022 for AUD with and without PTSD will be evaluated in this IRB-exempt retrospective chart review of outpatient veterans at the Phoenix VA Health Care System (PVAHCS). Patients will be included if $\geq$ 18 years of age, dispensed $\geq$ 28 consecutive days of topiramate, and have a diagnosis of AUD (with and without PTSD). Patients will be excluded if AUD pharmacotherapies were co-prescribed alongside topiramate. Baseline data will include age, gender, additional comorbid substance use disorder(s), history of outpatient or inpatient treatments programs, current PTSD-pharmacotherapy, alcohol cravings, number of drinks per drinking days, number of drinks and heavy-drinking-days per week, and PTSD symptoms within DSM-V Criterion (B/C/D/E). Data at 3 and 6 months of topiramate therapy will also be collected and include: topiramate total daily dose, side-effects, duration of therapy, topiramate adherence, number of drinks per week, reduction in drinks per week or alcohol cravings, time to first relapse, hospital visits related to alcohol use, laboratory tests positive for alcohol use, and whether PTSD symptoms improved within DSM-V Criterion (B/C/D/E). **Outcomes:** In addition to baseline demographic data of both groups, the authors will report and compare whether topiramate reduced drinks per week, and other measures of alcohol use and PTSD symptom severity, including time to first AUD relapse and improvement in PTSD symptoms within DSM-V Criteria (B/C/D/E).

Tricyclic Antidepressant Serum Concentration Monitoring at an Inpatient Psychiatric Hospital

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Type: Work in Progress. **Background:** Therapeutic drug monitoring (TDM) is used to measure serum concentrations of several different classes of psychotropic drugs. Studies evaluating tricyclic antidepressants' (TCA) serum concentrations showed significance between therapeutic concentration and clinical response. Other studies that looked at TCA-induced central nervous system toxicity concluded the risk was positively correlated with elevated TCA serum concentration. The 2017 updated Consensus Guidelines for Therapeutic Drug Monitoring in Neuropsychopharmacology recommended the use of TDM for TCAs given evidence of toxic effects at supratherapeutic serum concentrations. However, unlike medications such as lithium, the relationship between serum concentration and therapeutic effects of TCAs is not clear. Therefore, literature recommends the use of TCA TDM as an expert opinion reflecting the lack of evidence in clinical practice. This study would provide additional information regarding the clinical benefits of performing TCA TDM to ensure patient safety. **Objective:** To evaluate the correlations between TCA serum concentration and dosing regimen changes. **Methods:** This IRB-approved retrospective cohort study will include patients who were admitted to an inpatient psychiatric hospital and had a recorded serum concentration of amitriptyline, nortriptyline, clomipramine, imipramine, desipramine, or doxepin from December 1, 2017 to July 31, 2022. Patients who were under six years of age or were prescribed a TCA without psychiatric indications will be excluded. Patients will be categorized into three arms based on serum concentration below, within, or above the therapeutic range. Patient demographics, past medical and psychiatric history, and information pertinent to the serum concentration, including TCA regimen before and after, will be collected. Descriptive statistics and χ^2 tests will be performed to evaluate the primary objective. **Outcome:** The primary nominal outcome is dosing regimen changes within seven days, which is defined as either (1) remained the same or increased or (2) decreased or discontinued. Specific subgroups, including corrected serum concentration, parent molecule serum concentration, and individual TCA medications, will be evaluated to identify potential patient populations who would more likely benefit from TCA TDM.

Understanding Adverse Drug Reactions: The Impact of Prescriber and Nurse Education at a State Psychiatric Hospital

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Type: Work in Progress. **Background:** The current process for reporting an adverse drug reaction (ADR) at our facility encourages any staff member suspicious of an ADR to report it to the pharmacy department. A pharmacist will investigate the claim, alert the prescriber if needed, and fill out an ADR form. Adverse drug reactions are often underreported and may be confused with side effects. Adverse drug reactions may occur at any time within any healthcare environment, which is why it is important for various members of the healthcare team to possess the knowledge necessary to properly differentiate and report ADRs. **Objectives:** (1) Assess nursing staff and prescriber understanding of ADRs. (2) Compare the number of ADRs reported pre- and post-education. (3) Analyze the medication classes involved in the ADRs reported. (4) Identify barriers with current ADR reporting process. **Methods:** This IRB-exempt quality improvement project will assess nursing staff and prescriber baseline knowledge regarding ADRs via a survey. The pre-education survey will allow participants to report issues with the current reporting process. The survey is followed by a pre-recorded, pharmacist led educational video about ADRs. The last initial step is to complete a post-education survey. The link for study participation was distributed via email on November 30, 2022, and the deadline for completion is December 31, 2022. There will be a second post-education survey to assess retention of the information learned. This survey will be distributed on January 23, 2023. The deadline to complete the post-education survey is February 15, 2023. Additionally, a de-identified report will be generated to determine the quantity and characteristics of ADRs reported for two months before and two months after the educational intervention. Included in this report will be the medication and drug class of the offending agents and the severity of the ADR. **Outcomes:** This study will compare post-education survey results with pre-education survey results. It will also compare the number of ADRs reported and the medication classes involved in ADRs before and after staff education. Any issues with the reporting process noted in the surveys will be assessed in an attempt to make any necessary improvements.

Use of Emergent Intramuscular Diphenhydramine, Haloperidol, and Midazolam in Acute Agitation Management in Patients with Psychiatric Conditions

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Type: Work in Progress. **Background:** Intramuscular (IM) haloperidol, lorazepam, and diphenhydramine are commonly administered together in acutely agitated patients who pose a harm to the patient-care team, surrounding patients, or patients themselves. While lorazepam is traditionally the preferred benzodiazepine used in acute agitation, midazolam has been proven to have a faster onset and shorter time to arousal when compared to lorazepam. To date, no data has been studied regarding administration of haloperidol, diphenhydramine, and midazolam as a combination therapy. Therefore, this study aims to evaluate the efficacy and safety of IM haloperidol, diphenhydramine, and midazolam in treating acute agitation in patients with mental illnesses. **Objectives:** (1) To evaluate the effectiveness of combination haloperidol, diphenhydramine, and midazolam in treating acute agitation. (2) To evaluate the impact of combination haloperidol, diphenhydramine, and midazolam on patient safety and emergency treatment services (ETS) length of stay. **Method:** This IRB-approved, retrospective chart review will include patients older than 18 years who received emergent IM injections for acute agitation in a psychiatric emergency department between January 1, 2022 and December 31, 2022. Patients were eligible for inclusion if they received a combination therapy of either IM haloperidol, diphenhydramine, and lorazepam or IM haloperidol, diphenhydramine, and midazolam. Baseline demographics, efficacy, and safety data will be collected using the institution's electronic health record, EPIC. The primary outcome will be measured using the Behavioral Activity Rating Scale (BARS) to compare baseline score to post-medication administration score. Clinical response to medications will be evaluated from documentations available on EPIC from nursing and physicians. **Outcomes:** Baseline demographics, such as patient's age, sex, weight, and race/ethnicity, will be reported. The primary outcome will report the change in BARS following medication administration, time to arousal following medication administration, and the number of over-sedation incidents (noted by BARS score of 1). The secondary outcome will report changes in patients' vital signs at baseline and 60 minutes after administration, length of stay in ETS, and if additional emergent IM medications were needed for further agitation management.

Use of Short-Acting Injectable Antipsychotics for Management of Acute Agitation in Adult Inpatient Psychiatry

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Type: Work in Progress. **Background:** Currently, there is no consensus on the optimal antipsychotic for acute agitation. Haloperidol is frequently utilized for the management of acute agitation associated with underlying psychosis and has proven efficacy. However, haloperidol may not be the optimal initial choice for all patients because of the risk of uncommon but severe side effects, including extrapyramidal symptoms and cardiovascular problems. Studies evaluating second-generation antipsychotics have shown improved safety and tolerability compared to haloperidol, with similar efficacy when used for acute agitation. This study aims to determine the effectiveness of intramuscular (IM) haloperidol versus chlorpromazine, olanzapine, and ziprasidone for acute agitation in adults on an inpatient psychiatry unit. **Objectives:** The primary objective is to compare the effectiveness of IM chlorpromazine, olanzapine, and ziprasidone versus haloperidol for acute agitation, measured by the need for subsequent antipsychotic or restraint within 2 hours of initial medication administration. Secondary objectives will capture effectiveness at 24 hours, characterize agents used and assess safety. **Methods:** This is a retrospective medical record review of patients admitted to adult inpatient psychiatry at an academic medical center between January 1, 2018 and December 31, 2022. Patients aged 18 to 65 years will be included if they received at least one dose of IM haloperidol, chlorpromazine, olanzapine, or ziprasidone for agitation during admission. Inferential statistics will be performed for the primary outcome, and descriptive statistics will be used for secondary endpoints. **Outcomes:** We will report the demographics of the population, including psychiatric and non-psychiatric diagnoses. Efficacy endpoints will include the agent, dose, and timing of administration for the first and subsequent IM antipsychotic administered during the encounter, as well as the use of physical restraints and IM benzodiazepines. Safety endpoints will include documented extrapyramidal reaction, use of rescue medication or newly documented intolerance to the IM antipsychotic received.

Utility of DEA-Licensed Pharmacist as Primary Prescriber in Benzodiazepine Taper Clinic

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Type: Work in Progress. **Background:** Benzodiazepines are a class of medication that bind to the benzodiazepine site of gamma-aminobutyric acid-A (GABAA) receptors in the brain and enhance GABA-mediated synaptic inhibition. Benzodiazepines are indicated for various conditions but are generally only appropriate for intermittent or short-term use. Despite this, they are often continued long-term for various disease states that may not be appropriate indications. Benzodiazepines' potential for physiological dependence, a lack of provider and patient education, along with frequent provider turnover, are all factors that can contribute to inappropriate long-term benzodiazepine use. Veterans are an especially vulnerable population for inappropriate benzodiazepine use due to the greater prevalence of post-traumatic stress disorder (PTSD) and their higher median age compared to the general population. It is important to establish the utility of a drug enforcement administration (DEA)-licensed pharmacist in providing education and offering benzodiazepine tapers to patients who may be prescribed benzodiazepines inappropriately. **Objectives:** (1) Evaluate percentage of benzodiazepine dose reduction after DEA-licensed pharmacist intervention compared to baseline. (2) Identify improvements in patient standardized measurement-based care tools from baseline to end of study. **Methods:** This IRB exempt quantitative study will include veterans who were willing to attempt a benzodiazepine taper within the Roseburg VA Health Care System between October 1, 2022 and March 31, 2023. Veterans are identified via chart review, ad hoc referrals from providers, or self-referral to Eugene VA Primary Care Mental Health Integration clinic. Veterans will be evaluated for initial benzodiazepine dose upon initiation into clinic and provided patient-centered tapering plan. Descriptive statistics will be used to evaluate the effect of a DEA-licensed pharmacist on benzodiazepine use of patients enrolled in the study. **Outcomes:** We will report results of tapers and changes in patient standardized measurement-based care tools to VA leadership. Will utilize results to promote DEA-licensed pharmacist capability to provide safe and effective patient care with benzodiazepine tapers.

Utilization of a State-wide Health Information Exchange for Contingency Management in a Behavioral Health Population

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Type: Work in Progress. **Background:** Contingency management, a process which uses positive reinforcement in the form of vouchers or prizes to promote a desired behavior, is often used in the treatment of substance use disorders. Contingency management has been shown to increase abstinence from substances as well as improve retention in treatment programs for substance use, human immunodeficiency virus (HIV), and even myocardial infarction. Additionally, studies have looked at and seen a reduction in admission rates to psychiatric hospitals due to the implementation of a contingency management program. To the knowledge of the authors, there is not currently a study which observes the effect of implementing a contingency management program on medication adherence and readmission rates by utilizing a health information exchange. **Objectives:** (1) Assess influence of incentivization on medication adherence by tracking prescription fill history. (2) Observe change in readmission rates following program implementation. **Methods:** This retrospective chart review will include patients aged 18 years and older with South Dakota Medicaid who were discharged from the Adult B inpatient unit at a behavioral health center from December 1, 2021 to February 28, 2022. Readmission within 30 days of discharge will be reviewed for this population. This group will be compared to South Dakota Medicaid patients discharged from the same unit and enrolled in a pre-established follow-up incentive program from December 1, 2022 to February 28, 2023. Patients will be excluded from the enrollment group if they are not discharged with a prescription. Information including age on day of discharge, payer type, discharge date, admission and discharge medication lists, date of any readmissions, and prescription fill history will be collected using the electronic health record and health information exchange site. Additional data including patient enrollment status, follow-up phone call dates, incentives earned, and patient-reported medication compliance will be obtained from the follow-up incentive program's tracking form. **Outcomes:** Medication adherence differences between patients in the post-implementation group will be observed. Readmission rates for the patient group pre- and post- contingency management program implementation will be compared.

Innovative Practices Abstracts

Addressing the Rising Stimulant Overdose Crisis with Academic Detailing

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Type: Innovative Practices. **Background:** Overdose deaths (OD) continue to climb in the United States (US), with over 102 000 people dying annually from drug-involved OD in 2022. While synthetic opioids still account for most OD, from 2009-2022, there was a 10-fold increase in deaths involving psychostimulants (primarily methamphetamine), often combined with opioids. Health care must strike a balance to combat the rising stimulant overdose crisis while not causing unintentional harm to those treated with prescription stimulants for an FDA-approved diagnosis. To accomplish this, US Veterans Health Administration (VHA) Pharmacy Benefits Management (PBM) Academic Detailing Services partnered with stakeholders and subject matter experts on ADHD and stimulant use disorder (StimUD) to develop academic detailing (AD) strategies to assist providers to navigate this rising crisis. **Innovative service:** Academic detailing is a multifaceted, educational outreach intervention that delivers key messages to prescribers to align prescribing behavior with evidence-based practice. Several strategies were identified and deployed to enhance the treatment of StimUD while minimizing harm: (1) Provided didactic presentations to increase comfort around identifying and treating ADHD and StimUD; (2) Developed academic detailing educational materials and data tools for ADHD, naloxone and overdose education, and StimUD; (3) Trained academic detailers on StimUD and ADHD key messages to deliver at their facilities. **Impact on patient care:** From Quarter 3 Fiscal Year (FY) 21 to Quarter 1 FY23, there have been 2 648 AD outreach visits on StimUD and 758 AD outreach visits on stimulants/ADHD. Academic detailers focused on prescribing naloxone as a harm reduction strategy for patients with StimUD for 2 278 of the 2 648 AD outreach visits on StimUD. They have recorded over 270 hours of campaign activities (process improvement, in-services, and stakeholder engagement) focused on these topics since October 2020. This has resulted in a 144% increase in the number of veterans with StimUD dispensed naloxone, and the number of providers writing for this life-saving medication for StimUD doubling. **Conclusion:** Utilizing a comprehensive, multifaceted approach comprised of educational outreach, clinical implementation barrier identification and resolution, process improvement, and stakeholder engagement, academic detailers across VHA are assisting providers to address stimulant-related overdose deaths and delivering evidence-based treatment for ADHD.

Developing Ambulatory Care Clinical Pharmacy Services in a Gender Health Program

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Type: Innovative Practices. **Background:** Gender-affirming hormone therapy (GAHT) is associated with a variety of risks such as weight gain, acne, hypertension, venous thromboembolism, dyslipidemia, and cardiovascular disease. Ambulatory care clinical pharmacists provide a unique skill set to deliver comprehensive care and management of these risks. To the best of our knowledge, there is no current literature describing the impact of an ambulatory care clinical pharmacist as part of an interdisciplinary gender health team, the objective of this study. **Description of Innovative Service:** The Gender Health Program was established in March 2016 and provides specialized care to transgender and nonbinary patients. In May 2020, a psychiatric pharmacist joined the team. To further expand pharmacist involvement, an ambulatory care clinical pharmacist joined in June 2022 to pilot novel clinical pharmacy services, such as assessment and management of acne and medication-assisted weight loss, cardiovascular risk reduction (eg, diabetes, hypertension, etc.), and nicotine cessation. The pharmacist conducts patient interviews, provides comprehensive medication management including appropriate laboratory monitoring, and coordinates referrals to other healthcare providers. The primary outcome of this study is the number and type of interventions made by the pharmacist. **Impact on Patient Care:** The clinical pharmacist sees patients up to four hours per week. The pharmacist has seen a total of 47 patients, with a total of 79 appointments from June 27, 2022 to December 26, 2022. Forty-five percent of patients had two or more visits with the pharmacist. Ninety-one percent of visits included at least one intervention made by the pharmacist with a median of two medication interventions per visit. Further data analysis will include baseline demographics and appointment details (eg, appointment type, interventions made, etc.). **Conclusion:** The gender diverse population experiences significant distress and stigmatization both inside and outside of the healthcare setting. Given high rates of comorbid conditions, ambulatory care clinical pharmacists can achieve positive health outcomes related to comprehensive medication management for this community. Dissemination of the details and impact of this innovative service will provide other institutions a roadmap to replicate this service in their own health-systems.

Developing Site-Specific Guidelines for Gender-Affirming Care at a Forensic Psychiatric Hospital

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Type: Innovative Practices. **Background:** Recent data suggests that 0.5% of US adults identify as transgender. Current gender-affirming care practice guidelines are directed towards the outpatient setting, leaving a need for guidance specific to institutionalized adults. Opportunities exist for pharmacists working in an institutional setting to provide consultation and education services for patients seeking gender-affirming hormone therapy, especially in the forensic psychiatric setting. **Description of Innovative Service:** An Oregon State Hospital (OSH) specific Gender-Affirming Care Pharmacotherapy Handbook, intended for use by pharmacists in the setting of a consultation service, was developed by identifying best practices from reputable and authoritative national guidelines on gender-affirming care. These best practices were then compared against the actual care experience of a cohort of 19 patients who received gender-affirming hormone therapy between 2018 and 2022 to identify circumstances, challenges, and opportunities for improvement unique to OSH. **Impact on Patient Care:** Of the 19 patients in the pre-intervention sample, no patients had clearly defined goals of therapy documented in their chart, and gender-affirming language was used in 12 of 19 drug indications. Regarding dosing strategies, the appropriate dose based on guideline recommendations was chosen in all 19 patients, with appropriate dose adjustments made in 17 of 19 patients. Lab monitoring was ordered appropriately in 6 of 19 patients, with hormone levels and metabolic panels being the most inconsistent. This cohort review identified the following opportunities to improve gender-affirming care in the institutional setting: defined patient goals and use of gender-affirming language, appropriate dosing strategies, and consistent lab monitoring. Key recommendations selected for inclusion in the OSH Handbook include: (1) clearly document treatment goal; (2) collect detailed patient history; (3) order consistent labs with appropriate follow-up; and (4) provide pharmacotherapeutic support and engagement with both patients and providers. **Conclusion:** Patients who identify as transgender deserve complete and adequate gender-affirming care optimized for the unique opportunities of their environment. The use of uniform pharmacotherapy guidelines specific to OSH will ensure that all patients receive proper treatment, monitoring, and follow-up. These guidelines will support psychiatric pharmacists at OSH in managing safe, effective medication regimens. Future directions will include evaluating a cohort of patients after implementation.

Establishing a Collaborative Practice Agreement with Prescriptive Authority in a Local Mental Health Authority (LMHA)

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Type: Innovative Practices. **Background:** A local mental health authority (LMHA) is an entity responsible for all aspects of mental health care for persons in a specified region, including planning, coordination, allocation, and ensuring the provision of these services. The Harris Center for Mental Health and Intellectual or Developmental Disability (“The Harris Center”) is the LMHA for Harris County in Houston, Texas. The Harris Center provides services for the underserved, uninsured, and forensic mental health populations. Historically, LMHAs in Texas have not had collaborative practice agreements with prescriptive authority in place. The authority to sign a prescription drug order, under the Texas Pharmacy Act, is permitted in the following practice sites: federally qualified health center, hospital, hospital-based clinic, or academic health care institution. The Harris Center was approved for drug therapy management with prescriptive authority as an academic institution based on its academic affiliation agreements. **Description of Innovative Service:** As a pilot, the clinical pharmacy specialist (CPS) works under protocol with a supervising physician that provides care to patients on the assertive community treatment (ACT) team. The protocol outlines which psychiatric disease states the CPS can manage and medication classes, labs, and procedures the CPS can order. The CPS conducts individual patient visits and co-visits with the supervising physician when requested. The productivity of the CPS is based on number of encounters and interventions. **Impact on Patient Care:** The first patient was seen by the CPS on September 14, 2022. As of December 20, 2022, the CPS has received 41 formal consults (36 approved and 5 cancelled/denied), completed 88 patient encounters, successfully transferred 3 patients to a lower level of care, and documented over 400 interventions. Since adding the CPS to the ACT team, the supervising physician has been able to complete 22 intakes and increase caseload from 103 to 112, decreasing the number of patients on the wait list and increasing access to care. **Conclusion:** A major challenge for LMHAs in Texas is long wait lists of patients needing mental health care. The creation and approval of collaborative practice agreements with prescriptive authority represents a new practice setting for the psychiatric pharmacy specialty.

Evaluating a Novel Pharmacist-Led Buprenorphine Outreach Service for Treatment of Opioid Use Disorder in Individuals Residing in Supportive Housing

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Type: Innovative Practices. **Background:** The United States opioid overdose crisis has accelerated in recent years, with over eighty-thousand overdose deaths involving opioids in 2021 alone. Despite the availability of evidence-based and FDA-approved pharmacological treatment options, only one in four individuals with opioid use disorder (OUD) receives treatment. Past studies attempting to address this treatment gap suggest that low-barrier buprenorphine treatment models may improve patient engagement and retention in care, particularly for marginalized populations such as persons experiencing houselessness (PEH). Less is known, however, about the effects of such treatment models among persons residing in permanent supportive housing. **Description of Innovative Service:** In August 2022, Behavioral Health Services, a department of public health-run pharmacy in San Francisco, deployed a board-certified psychiatric pharmacist (BCPP) to permanent supportive housing sites. Patients were recruited for enrollment in the pharmacist-led service through outreach events, case-manager referral, and self-referral. Following an initial interview at the patient's residence, the pharmacist worked collaboratively to initiate buprenorphine and provided continued services such as weekly medication delivery, assessment, as well as regimen adjustment when appropriate. **Impact on Patient Care:** Forty patients were enrolled in the pharmacist-led buprenorphine outreach service between August 1, 2022 and October 31, 2022. Information gathered from this pilot program will be utilized to determine the feasibility of a novel pharmacist-led buprenorphine outreach service for individuals residing in supportive housing. Planned outcome measures include: (1) Pre- and post-enrollment buprenorphine treatment retention, defined as $>$ 80% days covered in a 3-month period; (2) Pre- and post-enrollment treatment adherence, defined as percentage of days covered; (3) Pre- and post-enrollment incidence of overdose, emergency department presentations, and hospital admissions; (4) Successful buprenorphine initiation, defined as continuation of buprenorphine beyond the initial prescription; (5) Linkage to a longitudinal service. Full impact on patient care will be presented at AAPP 2023 Annual Meeting. **Conclusion:** Full conclusion will be presented at AAPP 2023 Annual Meeting.

Evaluation of Medicaid Prescriber Report Card Intervention to Promote Appropriate Prescribing and Monitoring of Antipsychotics to Philadelphia's Youths

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Type: Innovative Practices. **Background:** High rates of antipsychotic prescribing to youth with Medicaid have raised concerns about potential misuse, requiring strategies that warrant promotion of antipsychotics' use within a broader treatment and monitoring plan that minimizes safety concerns and maximizes benefits to youths. As such, in December 2020, Philadelphia Medicaid implemented a report card aimed at positively influencing prescriber behavior to align accordingly. **Description of Innovative Practice:** In the report card evaluation, we measured the following outcomes for Medicaid prescribers in Philadelphia: (1) the number of Medicaid-enrolled youth aged 0 to 17 years with at least one antipsychotic prescription fill; (2) share of youth aged 5-14 years receiving an antipsychotic; (3) share of youth receiving polypharmacy for 90+ days; (4) share of youth receiving 2+ antipsychotics concurrently for 90+ days; (5) share of youth receiving an antipsychotic without an approved diagnosis; (6) share of youth not receiving lab testing; (7) share of youth who did not receive behavioral health outpatient services; and (8) share of youth who did not receive behavioral health outpatient services prior to their index antipsychotic prescription. The 2020 report card effectiveness was evaluated by utilizing a comparison group to assess antipsychotic prescribing patterns before (2019) and after (2021) the report card dissemination. **Impact on Medicaid-enrolled Youths:** The number of unique Medicaid-enrolled youth receiving an antipsychotic prescription fell only in the intervention group between 2019 and 2021 from 960 to 628. We also found that there were statistically significant declines in prescribing to youth under age 14 and for youth receiving polypharmacy. The share of youth with an unapproved diagnosis increased significantly in both groups although the rise was greater in the non-intervention group. There was also a 23% increase in the share of youth not receiving behavioral health outpatient services in the comparison group. **Conclusion:** Antipsychotic report cards in Philadelphia Medicaid were modestly effective, although they had an inconsistent impact across measures. More research is needed to understand how prescribers respond differentially to quality improvement interventions, and the trajectories that Medicaid-enrolled youth are taking amidst a drop-off in antipsychotic prescribing.

Evaluation of the Impact of a Mental Health Pharmacist in the Care of Veterans with Early Psychosis

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Type: Innovative Practices. **Background/Rationale:** Untreated early psychosis may lead to repeat episodes, causing

a worsening in cognitive and social function; therefore, guidelines recommend antipsychotic treatment for at least one year after symptom remission. A medication use evaluation within a Veteran Affairs Health Care System (VAHCS) showed that these recommendations were met in 20.3% of veterans with early psychosis, which is consistent with previous studies. The Early Psychosis Intervention Coordination (EPIC) interdisciplinary team was developed within the VAHCS with the goal of improving treatment engagement in this patient population. The purpose of this evaluation is to assess the impact of a Mental Health Clinical Pharmacy Practitioner (MH CPP)-guided service implemented in the EPIC program within a VAHCS. **Description of Innovative Service:** This single-site, prospective quality improvement initiative evaluated MH CPP integration into a VAHCS EPIC team between March 1, 2022 and June 30, 2022. Veterans were eligible for MH CPP services if they were under 40 years old, first diagnosed with one or more qualifying psychotic diagnoses in 2020 or 2021, and had less than 80% adherence to antipsychotic medication in the year following their initial qualifying diagnosis or no antipsychotic prescribed at all. Veterans successfully contacted were offered education on MH services, medication management, care coordination, and suicide screening. Chart review was conducted 60 days after their initial contact to assess for completion of care coordination interventions. The primary outcome was total number of MH CPP interventions. Secondary outcomes described the categorization and results of MH CPP interventions. **Impact on Patient Care/Institution:** Of the 69 eligible veterans identified, 13 met inclusion criteria and 11 were successfully contacted by the EPIC team MH CPP. Interventions were made in nine of the 11 veterans (82%). In total, there were 31 interventions with an average of 2.7 interventions per patient. Interventions included education (n = 12, 38.7%), care coordination (n = 9, 29.0%), and suicide screenings (n = 9, 29.0%). **Conclusion:** While the MH CPP was greatly valued by the interdisciplinary team, the limited number of medication-related interventions completed during the MH CPP-guided service suggests further role optimization is needed to provide more efficient care for these veterans.

Exploring the Impact of a Psychiatric Pharmacist in Resolving Drug Therapy Problems and Improving Patient Outcomes at a Mental Health Center

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Type: Innovative Practices. **Intro:** Psychiatric pharmacists providing direct Comprehensive Medication Management (CMM) services offer specialized clinical expertise focused on resolving medication-related problems and improving overall patient care outcomes. The purpose of this study is to describe CMM practice outcomes, such as number of resolved medication problems, interventions, and changes in patient outcomes over multiple direct care visits. **Methods:** Adult patients (n = 63 with 480 appointments) at a mental health center between January 1, 2016 and December 31, 2019 were analyzed to determine the impact of a psychiatric pharmacist providing CMM services on patient care. For inclusion, a minimum of one baseline evaluation and follow-up visit was required. Pharmacist-rated Clinical Global Impression (CGI) symptom (S) plus improvement (I) scores, patient depression (Patient Health Questionnaire-9 [PHQ-9]), and anxiety (General Anxiety Disorder-7 [GAD-7]) scores were analyzed. Medication therapy problems (MTPs) were identified and their resolutions tracked. A paired *t* test was used to compare patients' CGI-S, CGI-I, and PHQ-9 scores before and after receiving CMM services. A CGI-I score < 3 was the threshold for improved outcome. **Results:** The most common psychiatric conditions were major depressive disorder (n = 35) and schizophrenia spectrum and other psychotic disorders (n = 30) with the mean number of medications being 13. The most common MTPs identified by the psychiatric pharmacist were adverse drug reactions (19.45%) and additional lab monitoring (17.86%). Of the MTPs identified, 85.94% were addressed by the psychiatric pharmacist with interventions to resolve the MTP. There were a total of 479 (50.63%) MTPs resolved through appointments with the psychiatric pharmacist. The CGI-I scores dropped significantly from 4.61 to 3.79 ($P < .0001$) with CMM services, demonstrating improvement in the patient's condition. Excluding patients with personality disorder, the proportion of patients with CGI-I < 3 significantly increased from 18.37% to 26.74% ($P = .0275$). There was no statistically significant difference in CGI-S and PHQ-9 based on all available data entries. **Conclusions/ Discussions:** Demonstrating global improvement through patient care outcomes in a pharmacist's CMM practice demonstrates a novel use of a psychiatric rating scale. However, lack of an independent clinician rater is one significant limitation. Identifying and resolving drug therapy problems and improving patient care outcomes highlights the value of pharmacist CMM services for people with severe mental illness.

Impact of Depression Support Text Message Intervention

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Type: Innovative Practices. **Background:** Major depression contributes to impairment in daily functioning and if not treated, can result in serious morbidity and mortality. While antidepressants are an effective modality of treatment, approximately 30% of patients discontinue their medication within the first six months of initiation. Text messaging interventions have shown positive results in improving patient behaviors such as refilling medication prescriptions. **Description of the innovative service:** This depression support text message intervention was established by a managed care organization serving Medicaid beneficiaries, in partnership with a leader in mobile health engagement solutions. Messages were sent to those newly prescribed antidepressants and were designed using behavioral change strategies. Messages consisted of refill reminders, depression related education and resources, and tailored guidance. Curation of automatic replies allowed for two-way texting to address specific expressed needs. When self-harm was expressed, participants were provided with a crisis hotline and their information was provided to the team for follow up. Participants were recruited utilizing claim data and chose to opt into the program by providing their birthdate. Participants received conversations for up to six months between April 24, 2022 and December 31, 2022. **Impact on patient care:** The program reached 3 310 participants with an overall engagement rate of 26%, consistent with industry standards. Of those who interacted with the text messages, conversations received high engagement rates up to 86%. The resources provided also received positive feedback. In response to an educational flyer, someone said "Yes it was very helpful thank you I save it in my phone." The top barriers included forgetting to pick up their medication and being unable to get to the pharmacy. When asked how helpful they found the program, 70% of respondents rated the program a four or five, on a five-point Likert scale. **Conclusion:** This two-way texting program showed high engagement rates for Medicaid populations, a particularly hard population to reach, and was positively received by participants. Data collected from this intervention will be used to address barriers more broadly in future interventions. Additional texting programs will be implemented to address various behavioral health needs, considering the success of this program.

Impact of Mental Health Clinical Pharmacist Practitioner Services Within a Veterans Affairs Clinical Resource Hub

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Type: Innovative Practices. **Background/rationale:** The Veterans Affairs (VA) implemented Clinical Resource Hubs (CRH) to increase access to services by leveraging telemedicine. Each Veterans Integrated Services Network (VISN), which include multiple VA facilities in a region, has established CRHs. The VISN 6 Mental Health CRH provides medication management and therapy services across VISN 6. The integrated healthcare team includes mental health clinical pharmacist practitioners (MH CPPs), nurses, psychiatrists, psychologists, and social workers. **Description of the innovative service:** The primary role of MH CPPs is to provide mental health gap coverage for VA facilities via direct patient care through telemedicine into the home or into the clinic. The CRH MH CPPs have primarily provided gap support for medication management by serving on multiple behavioral health interdisciplinary program (BHIP) teams across VAs within VISN 6. Providing this support allows facilities time to hire staff and provide coverage for extended leave without overburdening current staff and improving continuity of care for the veterans by allowing them to stay in the VA. Innovative practices implemented by the CRH MH CPPs include development of a joint intake clinic, integration into the substance abuse treatment program for alcohol use disorder treatment, development of a whole health group, and virtual same day access services. Several of the MH CPPs have also obtained a Drug Enforcement Administration (DEA) license to expand prescribing abilities. **Impact on patient care:** The program initiated in 2019 with one MH CPP and has expanded to include three MH CPPs and a MH CPP supervisor. In the fiscal years of 2021 and 2022, the MH CPPs had 4 081 encounters and served 1 618 veterans. The MH CPPs had 2 671 (65.45%) video to home encounters, 1 246 telephone encounters (30.53%) and 67 (1.64%) video to clinic appointments. Since 2019, the MH CPPs provided coverage to multiple VA Health Care Systems. At initiation, the MH CPPs were not able to provide coverage for controlled medications. However, now three MH CPPs have a DEA license. **Conclusion:** The VISN 6 Mental Health CRH MH CPPs positively impacted patient care by developing innovative practices, hiring additional staff, and expanding coverage across VISN 6.

Impact of Mental Health Clinical Pharmacy Practitioners Providing Measurement Based Care through Clinical Resource Hub

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VISN 9 Clinical Resource Hub; Louisville, KY

Type: Innovative Practices. **Background:** Clinical Resource Hubs (CRH) within the Department of Veterans Affairs (VA) provide innovative, agile, team-based tele-

health services to veterans when local VA facilities experience gaps in care or service that negatively affect access to timely health care. CRH clinicians are virtually deployed to intercede staffing gaps and shortages due to VA medical facility staff attrition, extended leave, or an expanding veteran population. Hubs are equipped with a robust collection of telemental health services enhanced with nursing and clinical pharmacist practitioners to ensure veteran mental health care continues without disruption, regardless of the veteran's or clinician's location. Due to a pervasive psychiatry shortage, CRH Mental Health Clinical Pharmacist Practitioners (MH-CPPs) are often deployed to temporarily fill staffing gaps where a MH prescriber has left, collaborating with the remaining team of psychologists and licensed certified social workers for diagnostics and therapy. **Description of the Innovative Service:** Two MH-CPPs were virtually stationed in spoke site Behavioral Health Interdisciplinary Program (BHIP) team within Tennessee Valley Healthcare System from June 1, 2022 to December 31, 2022 as prescribing providers. The MH-CPPs provided coverage due to shortages of MH providers and had prescribing authority through scope of practice at the facility. Both MH-CPPs were integrated into interdisciplinary BHIP teams and managed a panel of BHIP patients. Providing measurement based care (MBC) is a focus of the VA and CRH. Measurement based care is a clinical process where clinicians and veterans use patient-reported outcome measures data to track veteran progress and help make informed treatment decisions. **Impact on Patient Care:** During the six month time period from June 1, 2022 to December 31, 2022, the MH-CPP provided care for a combined total of 1 505 patient care encounters. Mental health conditions that MH-CPPs provided care for include depression, insomnia, PTSD, bipolar disorder, anxiety, schizophrenia, personality disorders, and ADHD. During this same time period, the CRH MH CPP focused on providing MBC and completed 1 538 surveys with patients. **Conclusion:** Mental Health Clinical Pharmacist Practitioners can be effectively utilized to provide mental health care to patients through virtual modalities in areas with staffing shortages while meeting needs in patient care.

Implementation and Evaluation of PHASER Pharmacogenetic Testing Program in a Veterans Affairs Mental Health Setting

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Type: Innovative Practices. **Introduction:** Personalized medicine is a growing movement within healthcare, and frontline providers have noted an increasing demand for pharmacogenetic (PGx) testing from patients in recent years. Understanding information about genes which are known to impact the metabolism of medications may be useful in predicting the risk of adverse effects as well as clinical response to certain medications. **Purpose:** The aim of this study is to implement a standard protocol to offer Pharmacogenetic Testing for Veterans (PHASER) at the William S. Middleton Memorial Veterans Hospital who receive care in mental health settings. In implementing of this program, identify successes and challenges of PHASER program within this Veterans Affairs site. **Methods:** A single-centered retrospective chart-review analysis of veteran patients who consented to PGx testing in the Mental Health (MHC) and Integrated Care (IC) Clinics within the William S. Middleton Memorial Veterans Hospital system from November 1, 2021 to October 1, 2022. Data collection includes, but are not limited to: PGx results, medication(s), and laboratory. **Results:** From a safety perspective, PGx results can be integrated into electronic medical records to provide additional information to improve patient outcomes and safety. In the event of a prescribed medication that carries an actionable genetic variant, prescribers will be alerted. From an efficacy standpoint, the prescriber can consult Clinical Pharmacist Prescriber (CPP) to review current medications that are impacted by PHASER results. This assessment provides evidence-based medication recommendations based on the Clinical Pharmacogenetics Implementation Consortium (CPIC) guidelines to aid clinical decisions. This study has some limitations. Although there are evidence-based guidelines for different classes of antidepressants, the CPIC still has limited pharmacogenomics guidelines for antipsychotics. More than 30% of patients in this study have antipsychotic(s) on their medication list. Since this is a single-center study, the result might not be applicable to other facilities due to the lack of external validity. **Conclusion:** The results of this study suggest that PGx information can enhance the efficacy of medications, minimize medication adverse events, and improve patient outcomes when incorporated into the medication-prescription process.

Implementation and Outcomes of a Behavioral Health Integration Program: A Focus on Post-discharge Follow-up and Transitions of Care

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Type: Innovative Practices. **Background:** The importance of timely post-discharge follow-up after Emergency Department (ED) visits and hospitalizations for patients with mental illness is well known. Follow-up care for people with mental illness is linked to reduced likelihood

of rehospitalizations and ED visits, decreased costs of outpatient care, increased compliance with follow-up instructions, and improved patient outcomes. For patients with substance abuse or dependence, follow-up may reduce substance use, future ED visits, and hospital admissions. Pharmacists could increase access to post-discharge follow-up for people with mental illness and substance abuse. **Description of Innovative Service:** This grant-funded, pharmacist-led, outpatient clinic was developed to provide initial follow-up for patients with mental health conditions within 30 days of discharge and monitoring thereafter. Care is provided through phone, video, or in-clinic appointments. All patients discharged from inpatient medical care and the ED are screened for mental health diagnoses and psychotropic pharmacotherapy for potential inclusion in the service. Patients are scheduled with a pharmacist for an interview and assessment including review of medical records, medication reconciliation, identification of gaps in care, and provision of patient education. Notes are documented for each encounter, and patients' providers and/or pharmacies are notified of recommendations or concerns as needed. Other services include providing drug information, in-service education, rounding with psychiatry consult service, and precepting trainees. **Impact on Patient Care:** This program provided post-discharge follow-up to 1 484 unique patients, with 531 additional follow-up encounters, from May 1, 2021 to December 31, 2022. The pilot phase from May 1, 2021 to December 31, 2021 was conducted without data collection. Data was collected during phase two from January 1, 2022 to December 31, 2022. Pharmacists spent an average of 33 minutes per encounter, advised 24 ED/Urgent Care visits, and identified 3 201 medication discrepancies. Of 1 186 encounters completed in phase 2, 83.9% (995) included patient education and 57.9% (687) resulted in contacting provider(s) with recommendations. **Conclusions:** Patients with mental health conditions recently discharged from the hospital can benefit from timely follow-up to ensure connection with appropriate care after discharge. Pharmacists are uniquely positioned to offer post-discharge follow-up services, improve access to care, and coordinate with patients' providers.

Implementation of a MAT Program in a County Jail

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Type: Innovative Practices. **Background:** Drug overdose is one of the leading causes of death in persons returning to the community after incarceration. Approximately half of all federal and state inmates meet criteria for a substance use disorder, however very few correctional facilities offer recommended treatments. There are numerous barriers, including stigma and lack of resources, that precipitate the current treatment disparity within corrections. Opioid use disorder is a chronic, treatable illness that necessitates treatment, particularly in this high-risk sub-population. Given unknown inmate release dates, strict regulations with methadone and high-cost burdens associated with naltrexone ER injections, sublingual buprenorphine proved to be the most accessible treatment option. **Description of Innovative Service:** In 2022, a medication-assisted treatment (MAT) program was implemented in a county jail by the local county health system. The MAT team consisted of an x-waivered physician, clinical pharmacy specialist, registered nurse, and social worker. Inmates were screened for eligibility and provided education and community resources. Eligible inmates were started on buprenorphine therapy and provided routine follow-up visits, which included screening for applicable infectious diseases. Continuation of community treatment was facilitated with a local clinic or treatment program. While incarcerated, eligible patients receiving treatment were housed together to minimize risk for diversion and to build therapeutic communities. Patients attended regular education/support groups. Each inmate signed a MAT Contract, medication consent and necessary release forms. **Impact on Patient Care:** The goal of this program was to prescribe buprenorphine to those who were preparing for release to the community. From January 1, 2022 to December 31, 2022, buprenorphine was provided to over 200 patients. Approximately 40% were sentenced to buprenorphine-compatible dispositions, whereas the remaining were tapered off due to incompatible dispositions or contract violations. There are plans to review rates of engagement with treatment after release, as well as ways to provide naloxone nasal spray upon release to community. **Conclusion:** The MAT Program within the county jail reached many patients, however encountered many predictable and unpredictable barriers. With increased awareness, resources, and fine-tuning, this program has the potential to reach many more patients and may provide an example for other correctional facilities that hope to implement similar MAT services.

Implementation of a Virtual Interprofessional Geriatric Mental Health Service

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Type: Innovative Practices. **Background:** Approximately 20% of those 55 years of age and older experience a mental health concern with the most common being anxiety,

cognitive impairment, and mood disorders. Stress associated with aging can exacerbate or cause mental illness. In addition, mental health concerns may present differently in the geriatric population thus often times going under-recognized and un/under treated. It is important to have specialty services to ensure accurate diagnostics and safe and effective medications are utilized when needed. **Description of Innovative Practice:** Veterans Integrated Service Network (VISN) Clinical Resource Hub established a Geriatric Mental Health team in late 2021 with the goal to provide geriatric mental health consult services to veterans across all five facilities in the VISN including rural veterans utilizing virtual care modalities to assess veterans at home or their closest VA clinic. The team includes a Geriatric Psychiatrist, Geriatric Psychologist, Geriatric Mental Health Clinical Pharmacist Practitioner (CPP) and mental health nurse (RN). This VISN was the first Clinical Resource Hub (CRH) to include a CPP in their Geriatric Mental Health program. The initial intake is a shared medical appointment included the psychiatrist, psychologist, and pharmacist. Unlike most consult services, veterans are then followed for individual appointments with providers as needed until goals of care/improvement in measurement-based care measures are met. **Impact of Practice on Patient Care/Institution:** The consult service launched in late January 2022 and is available in four of the five VISN 9 facilities. 312 consults have been received since inception of the service. Consults have been submitted from primary care, geriatric/memory clinic, primary care-mental health integration, general mental health, neuropsychology, and neurology. Specifically, the CPP has seen over 170 veterans and completed 500 encounters since launching the program. The CPP actively participates in shared intakes and provides individual comprehensive medication management follow-up visits. **Conclusion:** A virtual interprofessional geriatric mental health team allows for specialty services to be provided to all veterans regardless of location, reducing the driving burden to specialty services. This Geriatric Mental Health service allows for timely, evidence-based care for a special patient population while improving/assisting with access at the facility level.

Implementation of Psychiatric Pharmacists at Academic Medical Center

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Type: Innovative Practices. **Background:** Board Certified Psychiatric Pharmacists (BCPPs) are a strong resource for any healthcare system for their ability to improve access to psychiatric care, improve quality of psychiatric care, and help reduce healthcare costs. At UC Davis Medical Center (UCDMC), one of the pharmacy department's core goals is to service all patients with clinical pharmacy services. For decades, the psychiatric patient population has gone underserved without a BCPP on staff. **Description of the Innovative Service:** A gap analysis at UCDMC found not only did psychiatric patients at UCDMC lack clinical pharmacy support, but often patient care would suffer because of it. In August 2021, two BCPPs were hired with the intention of offering focused psychiatric pharmacy services to inpatients at UCDMC as well as offering educational opportunities for interdisciplinary providers and learners. The initial priority was to service the psychiatric emergency department, and the pharmacy service has grown to additionally service: consult liaison psychiatry, behavioral escalation support team, and outpatient psychiatry clinics. **Impact on Patient Care/Institution:** Between September 1, 2021 and March 30, 2022, two psychiatric pharmacists documented 734 interventions: 231 (31%) drug recommendations, 177 (24%) dose recommendations, 92 (13%) lab recommendations, and 48 (7%) "other." Since the implementation of BCPPs at UCDMC, 3 long acting injectable (LAI) antipsychotics as well as intranasal esketamine have been added to formulary, a versatile acute agitation guideline has been created, 100% of all clinical pharmacists have completed the behavioral health lecture series, and eight PGY2, one PGY1, and one pharmacy student have rotated through the service. The service has expanded to now include 3 BCPPs offering coverage 6 days per week at the hospital with additional ambulatory care support. **Conclusion:** Initial investment in BCPPs can be daunting; however, hiring pharmacists who are willing to work collaboratively and creatively to fit the need and supporting them in the process of trial and error have led to success at UCDMC. Future goals for this psychiatric pharmacy service line include establishing collaborative case conferences among ambulatory clinics, creating new outpatient services such as LAI clinic, advancing formulary, and supporting the psychiatric patient population at UCDMC.

Implementing Standardized Ketamine Dosing for Treatment Resistant Depression

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Type: Innovative Practices. **Background:** Depression has a lifetime prevalence of approximately 10% of adults in the United States. A third of these patients have treatment resistant depression (TRD), generally classified as an inadequate response to two or more appropriate trials of antidepressant treatment. The use of the general anesthetic ketamine, at subanesthetic doses, has shown to be beneficial in the treatment resistant patient population. Ketamine is an

N-methyl-D-aspartate (NMDA) receptor antagonist and can produce quick, but transient, treatment effects in depression. Ketamine for TRD is administered intravenously with typical dosing regimens of 0.5 mg/kg 1-3 times per week. **Methodology:** Our hospital currently doses ketamine using weight-based dosing with rounding to the nearest 0.1 mg. Weight-based dosing can be problematic in terms of medication waste and drug diversion because it often results in the discarding of excess ketamine. The process of using banded doses, a specified dose for a given weight range, would result in more standardized dosing that could be batched prior to the start of the ketamine infusion session. **Purpose:** The purpose of this project is to create a protocol for ketamine banding to be used in our patients receiving treatment for TRD. Banded ketamine batch preparation could decrease both the amount of medication waste relating to incomplete vial use, as well as the amount of time patients spend waiting for the infusion to be prepared. Following the implementation of this protocol, we will evaluate the differences in medication waste due to weight-based rounding, medication waste due to patients missing appointments, and changes in the duration of patient visits. **Conclusion:** The data obtained following the implementation of this dosing protocol will help determine the safety and efficacy of ketamine banded dosing in patients with treatment resistant depression along with the reduction in ketamine waste and patient waiting time. These results will be used to determine if our institution should permanently implement ketamine banded dosing or continue with the current weight-based dosing protocols.

Patient Characteristics Associated with Episodes of Agitation

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Type: Innovative Practices. **Background/Rationale:** This retrospective research study serves as an exploratory analysis to determine which patient characteristics, identifiable as discrete data elements in the electronic medical record (EMR), are potential risk factors associated with episodes of agitation. Currently, there is limited literature evaluating patient characteristics as risk factors for agitation. Previous studies primarily highlight patient demographics as risk factors for restraint use in agitated patients — lacking credibility and reliability. Our study aims to look beyond demographics to identify high-risk patients and design interventions to improve care of the agitated patient. **Description of the Innovative Service:** Through a multivariate regression analysis, this study identified eleven significant patient characteristics. This allowed for the development of a scoring model to flag patients at risk for episodes of agitation based on discrete data found within the EMR. The risk score is calculated at patient admission and can be updated based on predetermined factors, time frames, and new data entered into the EMR. Ultimately, the model would be integrated within the patient dashboard as an alert to the healthcare team. **Impact on Patient Care/Institution:** By identifying patients at risk for experiencing an episode of agitation, healthcare providers will have the opportunity to proactively address this potential risk. This allows for agitation to be treated as a possible complication of admission rather than as an acute emergency. We have created a model to guide pharmacists and other members of the healthcare team in tracking, preparing, and preventing episodes of agitation. Our model is critical in proactively identifying high-risk patients to improve not only the care and safety of all patients, but also the safety of the healthcare team. **Conclusion:** To our knowledge, this study is the first of its kind to associate patient characteristics, as discrete data elements, as risk factors for patient agitation. Our model suggests the eleven patient characteristics identified, rather than demographics, are more appropriate and applicable for identifying and designing interventions to improve care of the agitated patient.

Pharmacists Teaming Up in the University Outpatient Psychiatric Clinic to Effectively Implement Pharmacogenomics Clinical Services

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Type: Innovative Practices. **Description of the Innovative Service:** Pharmacogenomics (PGx) offers an excellent opportunity for pharmacists to be recognized as the clinical expert offering guidance on medication therapy management. Pharmacists are in a unique position to interpret PGx results and implement an effective action plan ensuring that each patient receives an appropriate medication regimen based on patient-specific genetic makeup. Several institutions have pharmacist-managed PGx services implemented already. At the University of Illinois at Chicago (UI Health), the pharmacy team took a unique approach for PGx consult service as a joint effort by combining the Precision Personalized Medicine Pharmacist Team with the psychiatric pharmacist. The goal was to combine the extensive background knowledge of psychopharmacology with PGx expertise to provide a comprehensive consult service to the UI health psychiatry team. With the very first PGY-2 Pharmacogenomics Pharmacy resident trainee embedded in the Mood and Anxiety Clinic, the initial start of the PGx

service in the psychiatry clinic was implemented. The PGY-2 resident was paired up with the psychiatry resident for medication management in an outpatient psychiatry setting. Through this process, patients who may potentially benefit from PGx testing were identified and were consulted by PGx service. Providers were willing and agreeable to the recommendations. Several educational in-services were scheduled to educate the psychiatry providers on evidence of benefit and value for pharmacist-involved PGx service. A system was embedded in the electronic health record infrastructure in order to put the referral and related process for documentation in place. Consult also engaged in collecting the samples, providing patient education, ensuring verification of insurance coverage for outside testing, and interpreting results with final recommendations being communicated to the order providers and to patients. After several in-services, consults from other specialty clinics started to emerge including the Adolescent/Child Psychiatry Department. This innovative pharmacy service offers education on the use of PGx and its applications to the therapeutic decision-making process for use by pharmacy students/residents and psychiatry resident training. In addition to expanding the referrals, research ideas for data collection and analyses are currently in process.

Psychotropic Stewardship: Advancing Patient Care

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Type: Innovative Practices. **Background:** The American Association of Psychiatric Pharmacists (AAPP) seeks to ensure every patient with a psychiatric disorder, including substance use disorders, will have their medications reviewed, optimized, and managed by a psychiatric pharmacist as part of a psychotropic stewardship team. Understanding that Board Certified Psychiatric Pharmacist (BCPP) is the gold standard credential for all psychiatric pharmacists, we must lead the way for psychotropic stewardship to promote the safe use of psychotropic medications to improve the lives of our patients. **Description of Innovative Service:** Modeled after antimicrobial stewardship, the authors summarize regulatory guidance regarding opportunities for psychotropic stewardship. Further, direction is provided for implementation of a psychotropic stewardship program (PSP), with BCPPs partnering with psychiatrists to co-lead these efforts. A Plan-Do-Study-Act (PDSA) model has been created to outline the core elements of a PSP, including (1) identifying team members; (2) engaging with the health-system; (3) providing strategic psychotropic medication review; (4) ensuring accountability; (5) conducting comprehensive medication management; (6) accessing supportive technology; (7) tracking outcomes; and (8) implementing education around the process and results. **Impact on Patient Care:** By using the Core Outcome Set for Psychiatric Pharmacists (COS-PP), the authors expect the impact on patient care to address all of the quadruple aims, including (1) improving patient care by targeting specific treatment goals; (2) reducing health care costs by decreasing lengths of stay and reducing utilization of urgent health care services; (3) enhancing the patient experience by increasing quality of life and improving coordination of transitions of care; and (4) enhancing provider well-being by enhancing collaboration and respect among team members. **Conclusion:** In addition to the benefits to patient care, implementation of PSPs will play a key role in the advancement of psychiatric pharmacy practice. The tools outlined can be applied to a variety of practice settings and patient populations. This will help guide BCPPs in their work to lead psychotropic stewardship teams to implement core outcomes, document successes, and generate support to enhance patient care and impact regulatory standards across health-systems.

The Development and Implementation of an Intensive Substance Use Disorders Curriculum in a Professional Pharmacy Program

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Type: Innovative Practices. **Background/Rationale:** Pharmacists are expected to play a multitude of roles, including ensuring patient safety and proper patient education, yet few pharmacists are adequately informed or prepared to assume these diverse functions as they relate to issues of substance misuse and dependence. Therefore, it is important to introduce education on substance use disorders (SUDs) early during PharmD students' training and include this education as part of their licensing exams. **Description of Innovative Service:** A curriculum focused on SUDs, consisting of 12 hours of various educational activities, was implemented at the University of Houston College of Pharmacy from September 1, 2020 until September 30, 2022. The team that developed and implemented the curriculum included clinical pharmacists, a behavioral health researcher, a clinical psychologist, and a psychiatrist. The curriculum included: an overview of SUDs, biopsycho-

social assessment, using non-stigmatizing language when referring to individuals with SUDs, SBIRT (screening, brief intervention, and referral to treatment), a recovery peer specialist sharing their journey with recovery, and role play and other interactive learning activities. **Impact on Patient Care:** After completing the curriculum activities, students (n = 118) reported positive feedback on the curriculum. The majority (91-99%) reported that the curriculum: increased their SUDs related knowledge, increased their understanding of their professional and ethical responsibility related to SUDs, helped them use non-stigmatizing language when addressing individuals with SUDs, and gave them the confidence to do more advanced work in SUDs. The latter indicates that proper education and training on SUDs of pharmacists facilitates the addition of pharmacists into a team-based care practice model when dealing with SUDs, which can help improve patient outcomes and reduce the SUDs treatment gap. **Conclusion:** Pharmacists' primary care role is enhanced by their accessibility because patients see community pharmacists 10 times more frequently than they see primary care physicians. The importance of integrating SUDs education into pharmacy professional training helps future pharmacists to champion the efforts to provide care to patients with SUDs. It also helps bring pharmacists' behavioral health and substance use training and expertise to their new positions extending the reach of SUD prevention, assessment, and referral to treatment to an under-utilized destination, the pharmacy.

The Development and Implementation of Best Practices to Reduce Burnout, Promote Healing, and Revive Inspiration in Psychiatric Clinical Pharmacist Practitioners at a Veteran's Hospital

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Type: Innovative Practices. **Background:** Burnout is defined as a "syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed." Due to the Coronavirus Disease 2019 (COVID-19) pandemic, healthcare workers have been exposed to greater mental and physical exhaustion secondary to staff shortages, treatment rationing, constant risk of infection, and tragic patient deaths. Recent burnout rates within the pharmacy profession resulted as 61.2% in hospital pharmacists, 64% in critical care pharmacists, and 74.9% in community pharmacists. These rates are among the highest compared to other specialties. Many health systems have identified burnout as an organizational priority. Organizational strategies can have a considerable impact on reducing burnout, therefore pharmacy and mental health leadership sought to uncover key dimensions of burnout for Clinical Pharmacy Practitioners (CPPs) within the mental health (MH) department and develop strategies to address these. **Description of Innovative Service:** The purpose of this project was to analyze the current state of burnout in the MH CPPs, identify key dimensions of burnout on an organizational level, develop practical interventions to present to pharmacy leadership, and implement those interventions to manage stressors and burnout, as feasible. Five action items were identified at a retreat, which focused on assessing the current state of burnout and identifying best practices and work-related interventions to help address burnout and reinvigorate MH CPPs. **Impact on Patient Care:** Although progress towards achieving the five actions items is ongoing, two action items have already been achieved. This includes a new referral process for a diagnostic second opinion to better guide appropriate medication management and thus outcomes for patients, and a review of the current electronic health record templates with the goal of streamlining documentation. **Conclusion:** As is the case for many healthcare professionals, MH CPPs have experienced increased burnout since the COVID-19 pandemic. By identifying the key organizational barriers to burnout from a MH CPP perspective, creating action items, and working towards solutions to reduce these barriers, it is anticipated MH CPPs will achieve reduced burnout, decrease work stressors, and improve the quality of patient interactions.

The Implementation of Controlled Central Nervous System Stimulant Medical Monitoring Outreach at a Veterans Affairs Hospital

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Type: Innovative Practices. **Background:** Central nervous system (CNS) stimulants can be life-enhancing therapies for people suffering from a variety of mental health and neurologic conditions. Amphetamine and methylphenidate medications carry FDA boxed warnings for abuse potential, dependence, and cardiovascular events. In order to mitigate these risks, the William S. Middleton Memorial Veterans Hospital requires urine drug screening (UDS) every six months for veterans prescribed stimulants. In 2022, the Veterans Health Administration Psychotropic Drug Safety Initiative (PDSI) launched a Phase 5 initiative to improve safe and appropriate stimulant use through yearly UDS and biannual vital sign collection. The purpose of this study was to evaluate the impact of provider education for stimulant monitoring recommendations and pharmacist-driven email alerts regarding compliance to every six month UDS and vital sign monitoring for veterans prescribed CNS stimulants. **Methods:** This is a quality improvement project

including Veterans prescribed CNS stimulants from December 1, 2021 to June 30, 2022 at a Veterans Affairs Medical Center in Madison, Wisconsin. The pre-intervention UDS and vital sign compliance rates were calculated in June 2022. Prescribers were then educated on monitoring requirements, and in August 2022, emails alerted prescribers to veterans who were overdue for monitoring or whose monitoring was due within the next three months. The primary outcome was the change in UDS and vital sign monitoring comparing the rates in June 2022 to December 2022. Statistical significance was determined using the χ^2 and sign tests. **Results:** A total of 381 stimulants were prescribed to 319 veterans with pre-intervention compliance rates of 72.7% for UDS and 65.8% for vital sign monitoring. There were no detected significant differences in compliance to UDS ($P < .246$) or vital sign monitoring ($P < .423$) after prescriber education and email alerts. **Conclusions:** Prescriber education and email alerts for UDS and vital sign monitoring for veterans prescribed CNS stimulants did not significantly improve compliance. This study supports the need for alternative approaches to support providers while mitigating risks of CNS stimulants to maintain safety.

There's No Place Like Home: Clinical Pharmacist Practitioners Collaborate With X-Waivered Providers to Provide Buprenorphine via Home Initiations During the COVID-19 Pandemic

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Type: Innovative Practices. **Background:** Social distancing in early days of the COVID-19 pandemic created many barriers to care. Federal agencies acted quickly to remove in-person controlled substance prescribing requirements allowing buprenorphine initiation for opioid use disorder (OUD) via telemedicine to a patient's home. Home initiation of buprenorphine for OUD has been shown to be just effective as in-clinic initiation. Within the Veterans Health Administration (VHA), Clinical Pharmacist Practitioners (CPPs) are advanced care providers with clinical and medication expertise on the interprofessional team. Opportunities exist to leverage the CPP in the delivery of OUD comprehensive care to initiate, monitor, and adjust medication and non-pharmacologic treatment, provide withdrawal management, care coordination, overdose education (including prescribing naloxone), screen for suicide risk, and engage in harm reduction strategies (ie, syringe services programs, fentanyl test strips). **Description of Innovative Service:** An internal VHA query was distributed via national CPP listservs from October 28, 2022 through November 16, 2022, describes the benefits and challenges of home initiations. The query asked respondents to reflect on their home initiation practice from October 1, 2021 through September 30, 2022. Twenty-three responses by CPPs from 16 different VA medical centers were received: 2 (9%) in primary care, 3 (13%) in general mental health, 9 (39%) in pain management settings, 9 (39%) in Substance Use Disorder (SUD) specialty. **Impact on Patient Care:** Respondents self-reported treating approximately 303 patients via buprenorphine home initiations during this time period. The following benefits of home initiations were noted: reduced travel burden for the patient (23%), improved access to OUD treatment (18%), patient more comfortable starting treatment in their own home (18%), improved willingness of patient to start OUD treatment (16%), improved patient-centered experience (15%), improved team efficiency (9%), decrease in clinic resources (1%). Twelve (52%) respondents are DEA registered practitioners or submitted paperwork to become DEA registered at the time of this survey. The primary challenges described included mailing delays of the medication and technology issues. **Conclusion:** Home initiations for OUD are a growing practice sparked by the pandemic. Integration of CPPs in various practice settings with X-waivered provider collaboration demonstrates an increase in access to OUD care.

Therapeutic Case Report Abstracts

Atypical Extrapyramidal Reaction to Haloperidol in a Young Hispanic Male

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Type: Therapeutic Case Report. **Background:** Extrapyramidal reactions can occur in patients treated with antipsychotics. Risk factors for dystonia include use of high-potency first generation antipsychotics (FGAs) in young males, without focus on race or ethnicity. Literature is limited regarding the Hispanic/Central American population. This case describes an El Salvadorian male who had repeat adverse reactions to haloperidol in two different settings and will highlight treatment barriers including language, lack of a universal health record, and potential role of race and pharmacogenomics. **Patient History:** A 21-year-old primarily Spanish speaking El Salvadorian male was admitted for mania. One month prior to admission, he was hospitalized for mania at a different hospital and discharged on divalproex sodium 750 mg/day, which he

self-discontinued after two weeks concerned about a rash. His outpatient provider initiated ziprasidone 20 mg twice daily. Upon admission, ziprasidone was resumed and lithium initiated. Early in his admission, he experienced an episode of restlessness, diaphoresis, tachypnea, hypertension, and altered mental status following a single dose of 2 mg intramuscular haloperidol. Neuroleptic Malignant Syndrome was ruled out. Collateral from his previous hospitalization reported a similar reaction following the second dose of haloperidol 5 mg (one intramuscular, one orally) administration where he held a "bizarre posture," despite diphenhydramine 50 mg prophylaxis. All haloperidol orders and his ziprasidone were subsequently discontinued. Quetiapine was trialed and discontinued. After discontinuing antipsychotics, his agitation, aggression, and symptoms of mania significantly improved on lithium and divalproex dual therapy, which he was ultimately discharged on. **Review of Literature:** Patients of Latinx background are often underrepresented in drug approval trials. A 2007 study compared outcomes of haloperidol versus olanzapine in Latin Americans versus White patients experiencing mania; it found tremor with haloperidol was higher in the Latin American population but overall did not find support that Latin Americans required lower doses. A 2016 meta-analysis suggested research on pharmacogenetics in Central America and Caribbean is limited or absent; and most data is in Costa Rican patients, and oncology; with El Salvador the least frequently studied (n = 112 [0.4%]). **Conclusion:** This case adds to the limited data regarding haloperidol-induced extrapyramidal reactions in Latin Americans.

Clozapine and Respiratory Depression: A Case Report

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Type: Therapeutic Case Report. **Background:** Clozapine is metabolized by various cytochrome P450 (CYP) enzymes and is a major substrate of CYP1A2. CYP1A2 induction mediated by polycyclic aromatic hydrocarbon exposure during smoking is well documented. Following smoking cessation, it takes up to five days for CYP1A2 activity to return to normal. Although effects are not always severe, in some cases decreased clozapine clearance following smoking cessation can cause symptomatic toxicity and subsequent respiratory depression. **Patient History:** The patient is a 46-year-old Caucasian male with a past medical history significant for schizophrenia, asthma, tobacco use disorder, and cannabis use disorder. The patient's social history included smoking approximately two packs of cigarettes per day reported by group home staff. The patient was taking clozapine prior to admission and his levels had been stable for an indeterminate amount of time. He presented to the emergency room with increased agitation and aggression. Various medications were initiated, including lorazepam, and he was admitted for stabilization. On Day 5, the patient experienced oxygen desaturation with an unknown cause leading to intubation. The patient spent nearly a week on mechanical ventilation. Due to muscle deconditioning and ventilator-associated pneumonia during the hospital course, discharge was delayed to Day 41. Clozapine levels throughout the patient's hospital course were drawn and returned as follows. The first levels were drawn on Day 2 of admission and returned on Day 7 at 895 ng/dL (reference: $< 1\,000$ ng/dL). The levels drawn on Day 5 returned on Day 9 at 1 396 ng/dL and the patient's clozapine dose was decreased. Levels drawn on Day 10 returned on Day 16 at 1 169 ng/dL. The fourth set of clozapine levels were drawn on Day 19 and returned on Day 23 at 315 ng/dL. **Review of Literature:** The clozapine prescribing information includes a warning for respiratory depression and increased risk when administered with benzodiazepines. A PubMed search revealed one published case report of clozapine-induced respiratory depression. **Conclusion:** This case report describes the well-known drug interaction between smoking and clozapine leading to the rarely documented severe outcome of respiratory depression. Increased clinician awareness, pre-emptive dose adjustment, and improved clozapine level turnaround may impact safety outcomes.

Lithium Dosing in Post-Transplant Patient With Unstable Fluid-Electrolyte Status: A Case Report

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Type: Therapeutic Case Report. **Background:** Lithium, a first line mood stabilizer for bipolar disorder, has a narrow therapeutic index posing a risk of toxicity necessitating serum concentration monitoring. The therapeutic range is (0.6-1.2 mEq/L), however toxicity symptoms, such as tremor, ataxia, nausea, diarrhea, and/or confusion may occur at levels > 1 mEq/L. Several factors may alter serum concentrations of lithium, including drug interactions, sodium imbalance, and acute kidney injury. **Patient-History:** A 64-year-old Caucasian male was in the intensive care unit after a planned single left lung transplant. Past medical history was significant for bipolar disorder (stable on lithium x 30 years), chronic obstructive pulmonary disease, scoliosis, remote leg amputation due to a motor vehicle accident, and pulmonary hypertension. Social history included 63 pack-years tobacco and alcohol use disorder in sustained remission. Post-transplant course was complicated by hyperkalemia, hyponatremia, atrial fibrillation with rapid ventricular response, hallucinations, and leukocytosis. Initially, home lithium regimen of 600 mg

every morning and 300 mg nightly was continued. However, twelve days following transplant, the 24-hour lithium level was 1.2 mEq/L, an increase from baseline 12-hour level of 0.79 mEq/L at admission, in the context of an acute kidney injury (AKI; SCr = 1.14 mg/dL versus 0.75 mg/dL at baseline) and decreasing sodium levels (129 vs 139 mmol/L at baseline). Over the course of 6 weeks, renal function and sodium levels varied and fluid status was impacted by intermittent diuresis and blood transfusions. Per patient preference and in consultation with psychiatry service, lithium was continued with dosing per levels with levels drawn every 1-7 days. **Review of Literature:** Dehydration, impaired renal function, and hyponatremia are all known causes of increased lithium levels. However, there is currently limited literature-based guidance for dosing lithium in patients with unstable fluid-electrolyte balance and renal function. **Conclusion:** This case report describes the complexities of lithium dosing of a critically ill patient who was previously well-controlled on lithium for decades with stable dose and therapeutic levels. This case demonstrates that lithium can be safely continued with close monitoring even in situations where pharmacokinetics are impacted by multiple factors.

Myoclonic Jerks Following Clozapine Initiation

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Type: Therapeutic Case Report. **Background:** Tonic-clonic seizures are the most commonly reported type of drug-induced seizure reported with clozapine, though myoclonic seizures may also occur. Myoclonic jerks may be more difficult to recognize as seizure activity and can precede development of tonic-clonic seizures. **Patient History:** A 39-year-old male with treatment-resistant schizophrenia since age 21 was admitted following a suicide attempt via self-inflicted neck laceration prompted by delusions and auditory hallucinations. Treatment prior to admission included lurasidone 80 mg daily and paliperidone palmitate 156 mg every 4 weeks (last injection 6 days prior to admission). Psychotic symptoms improved with a past trial of clozapine 450 mg/day, though sedation and weight gain led to discontinuation. A retrial of clozapine was attempted with uptitration by 25 mg/day. Myoclonic jerks were reported one day after receiving 125 mg/day. One day after increasing to 150 mg/day, patient had an incidence of significant orthostasis and reported that myoclonic jerks were occurring every 3-4 hours. Myoclonic jerks improved initially with dose reduction to 100 mg/day, but after two days these became more frequent and began to interfere with walking. Patient additionally experienced sedation, enuresis, and hyperglycemia during the 8 days on clozapine. Clozapine was discontinued and no further myoclonic jerks were reported following initiation of electroconvulsive therapy two days later. **Review of Literature:** A 2007 review of clozapine-induced seizures suggested that the risk of seizures increases with clozapine dose, with myoclonic seizures occurring at a mean dose of 535 mg/day. Case reports indicate that clozapine-induced myoclonus commonly occurs during treatment initiation, and one report describes myoclonic seizures with a clozapine dose as low as 150 mg/day used in combination with haloperidol. There are numerous reports of tonic-clonic seizures following the initial presentation of myoclonus with clozapine. **Conclusion:** As in this case, clozapine-induced seizures can manifest as myoclonic jerks and may occur at low clozapine doses during initial titration. It is possible that combination with other antipsychotics may lead to occurrence at a lower clozapine dose. Due to risk of subsequent tonic-clonic seizures, addition of an antiepileptic agent or discontinuation of clozapine should be considered if myoclonic jerks develop during clozapine treatment.

Neuroleptic Malignancy Syndrome? Benzodiazepine Withdrawal? Both?: A Case Report

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Type: Therapeutic Case Report. **Background:** Neuroleptic malignant syndrome, or NMS, is a rare life-threatening adverse reaction caused by exposure to anti-dopaminergic medications or due to abrupt withdrawal of medications with dopamine agonist properties. NMS is often characterized by hyperthermia, altered consciousness, muscular rigidity, and autonomic dysfunction. Primarily, patients will present with muscle rigidity and tremors, along with diaphoresis and urinary incontinence. Patients may also portray altered mental status, ranging from confusion to coma. In laboratory findings, certain values may be elevated to depict further evidence of the patient developing NMS. Blood pressure, heart rate, and temperature elevations are signs of NMS development and rapid progression. If diagnosed early, symptoms can be successfully reversed with various treatments. **Patient History:** This case discusses a patient with a psychiatric history of mood disorder, ADHD, PTSD, MDD who was nonadherent with medications prior to psychiatric hospitalization. During hospitalization, the patient received two doses of oral fluphenazine 2.5 mg for agitation, followed by chlorpromazine 50 mg intramuscular (IM) hours later. Due to tongue swelling the following day, patient was given diphenhydramine 50 mg IM. The following day, the patient began aripiprazole 5 mg and received oral fluphenazine 2.5 mg once for agitation. After medication administrations, a rapid

response was called on the behavioral health unit due to apparent stiffness, difficulty speaking, curling of toes, and diaphoresis. NMS was suspected as the creatine kinase was elevated at 5 259 U/L with leukocytosis; the patient was transferred to the MICU. NMS diagnosis was complicated by possible benzodiazepine withdrawal, possible acute dystonia, and history of seizures. Antipsychotic medications were discontinued and intravenous (IV) diphenhydramine was continued with the addition of dantrolene 1 mg/kg. Upon discharge, the patient no longer presented with muscle rigidity or stiffness and elevated laboratory values were trending downward. **Review of Literature:** Evidence suggests that exposure to any agent that disrupts dopamine transmission carries the risk of NMS, with first generation antipsychotics potentially the worst offenders. Removal of the causative agent, supportive care, and treatment with dopaminergic agents and/or dantrolene have been shown to improve symptoms. **Conclusion:** Clinician awareness of NMS symptom presentation and risk factors allows for quicker recognition, faster treatment, and reduced likelihood of mortality.

Picking the Brain: Treatment of Amphetamine/Dextroamphetamine Induced Excoriation Disorder

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Type: Therapeutic Case Report. **Background:** Excoriation disorder or dermatillomania, is a mental health condition where an individual compulsively picks or scratches their skin, which typically results in injury and scarring. This repetitive behavior disorder can be exacerbated by the use of illicit drugs such as methamphetamine or by prescription stimulant medications such as amphetamine/dextroamphetamine. **Patient History:** The patient is a 31-year-old white female veteran presenting with a past medical history of post-traumatic stress disorder, ADHD, insomnia, and mixed anxiety and depressive disorder. The patient was started on amphetamine/dextroamphetamine immediate release (IR) 10 mg on March 15, 2022 for management of ADHD. The dose was later increased to 20 mg due ineffectiveness. On May 12, 2022, the patient reported the medication was losing its effect and it was changed to amphetamine/dextroamphetamine extended release (XR) 15 mg — take two capsules once daily. Two months after the dose increase and change to the XR formulation, the patient reported severe skin picking lesions all over her body. On October 3, 2022, the patient said the pain level of her irritated skin was unacceptable due to the diffuse scabs present on bilateral legs, arms, abdomen, and back. The decision was made to taper and discontinue amphetamine/dextroamphetamine XR. It is believed that the amphetamine/dextroamphetamine was the primary contributing factor towards the patient's new onset excoriation disorder. No other medications, over the counter products, or herbals were started during this time and no other causative factors could be identified. **Review of Literature:** An extensive PubMed search was performed to identify the best practices for the pharmacologic treatment of excoriation disorder with ADHD. Our report reviews relevant literature surrounding possible treatment options for patients with concomitant excoriation disorder and ADHD. **Conclusion:** This case report demonstrates the unique presentation of excoriation disorder secondary to amphetamine/dextroamphetamine XR administration. Unique to other cases, this report reviews the paucity of data in patients with excoriation disorder and concomitant ADHD. Treatment options for this patient are limited, yet a few options are available for ADHD management including guanfacine and methylphenidate. Future research is needed to confirm a safe and effective treatment option for patients.

Potential Benefit of Naltrexone in a Patient with Autistic Disorder and Borderline Personality Disorder Exhibiting Self Injurious Behaviors

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Type: Therapeutic Case Report. **Background:** Self-injurious behavior (SIB) is when an individual attempts to physically hurt themselves without intent of suicide. The underlying mechanism for SIB is unknown. One hypothesis relates the pain pathway to release of endogenous opioids. Naltrexone is a pure opioid antagonist medication indicated for the treatment of alcohol dependance and blockade of exogenously administered opioids. **Complete Patient History:** Patient is a 22-year-old white female with a history of autistic disorder, borderline personality disorder, unspecified bipolar disorder, and SIB characterized by swallowing foreign objects. Self-injurious behavior has resulted in gastrointestinal complications. She has allergies to oxcarbazepine and divalproex sodium. Patient was admitted for continuation of care and stabilization of symptoms. Medications during first month of therapy included lurasidone 120 mg, lamotrigine 100 mg, levetiracetam 1000 mg, and diphenhydramine 50 mg. In month one, three complaints of SIB were noted and seven days of aggression were recorded, which resulted in as needed

(PRN) medication use. During month two, one SIB event was recorded and six days of aggression needing PRNs. Medication changes included diphenhydramine 100 mg, lamotrigine 150 mg, haloperidol 20 mg initiated, and lurasidone discontinued. Specialized behavior plan and dialectical behavior therapy initiated week six. In months three and four, three SIB occurred and 8 days of aggression needing PRNs, resulting in two oesophagogastroduodenoscopy procedures and 13 days of inpatient hospitalization. Lamotrigine was increased to 200 mg and levetiracetam was discontinued. After hospital stay and failure of previous lines of therapy, on month five naltrexone 50 mg and chlorpromazine 1200 mg were started. Haloperidol was discontinued. During months five and six, 3 days of aggression needing PRNs were reported and zero SIB. Patient graduated from behavior plan is awaiting discharge. **Review of Literature:** There are case reports that support the use of naltrexone to reduce SIB, but currently there are no large-scale trials conducted to study SIB in patients diagnosed with autistic disorder or borderline personality disorder. **Conclusion:** This may be an example where naltrexone helped reduce SIB in this population, but placebo-controlled trials without additional add on agents may help to elicit the actual benefit of naltrexone.

The Myoclonus Mystery: A Case of Lance-Adams Syndrome Complicated by Withdrawal Seizures of Alcohol Use Disorder

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Type: Therapeutic Case Report. **Background:** Lance-Adams syndrome (LAS) is a rare complication of successful cardiopulmonary resuscitation and is often accompanied by action myoclonus. There are only a few hundred cases of LAS that have been documented across the globe. The often uncontrollable myoclonus activity can start anywhere from days to weeks after a successful resuscitation. While not categorized as a seizure disorder, LAS is commonly treated with anti-epileptic medications. **Patient History:** The patient is a 41-year-old African-American male with a past medical history significant for hypertension, polysubstance abuse, hyperlipidemia, alcohol use disorder, and a history of a cerebrovascular accident with residual left-sided weakness. The patient has a history of poor medication adherence. After experiencing cardiac arrest with successful resuscitation, the patient experienced a hospitalization complicated by seizure activity, aspiration pneumonia, Torsades de Pointes, and myoclonic jerks secondary to post-anoxic injury to his cerebellum at which point the patient was diagnoses with LAS. Once deemed stable, the patient was discharged on clonazepam 0.5 mg twice daily and sodium valproate delayed-release 500 mg twice daily. Since that time, the patient experienced 16 emergency department visits and eight hospitalizations, the majority of which were due to complications secondary to myoclonus and seizure activity determined to be secondary to alcohol withdrawal. For his LAS treatment, the patient is currently treated with gabapentin 400 mg three times daily, divalproex sodium delayed-release 750 mg twice daily, and clonazepam 0.5 mg twice daily for fifteen days. There are plans for levetiracetam initiation if patient fails divalproex therapy. **Review of Literature:** A MEDLINE search revealed several case reports of LAS, but no reported cases of concurrent alcohol use disorder with associated withdrawal seizures. The limited data provides the most evidence with divalproex, levetiracetam, clonazepam, and perampanel use for LAS. **Conclusion:** This case report demonstrates the treatment of myoclonus associated with the rare neurologic disorder, LAS. This is the first case report evaluating the treatment of myoclonus of LAS in a patient with frequent episodes of alcohol-withdrawal seizures. Clinicians should be cognizant of nuances between assessment and treatment of the myoclonus of LAS and the seizures of alcohol withdrawal to ensure appropriate management.

Buprenorphine Enhanced Taper Tolerability Evaluation Report: A Case Report

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Type: Therapeutic Case Report. **Background:** In recent years there has been an emphasis on expanding treatment goals for opioid use disorder (OUD) beyond abstinence to better address the patient as a whole and their goals. Tapering off buprenorphine has been identified by patients as a potential outcome of success for OUD treatment, signifying a life of normalcy beyond dependence. However, this is a difficult outcome to achieve, as patients often have to endure withdrawal symptoms like nausea, body aches, and restlessness. Lowering barriers to patient centered outcomes like tapering off buprenorphine would support patient success and safety. A MEDLINE search revealed one published case series on the successful use of extended-release subcutaneous buprenorphine (ER-BUP) to aid the discontinuation of sublingual buprenorphine (SL-BUP) in three patients with an indication of OUD or chronic pain. A single injection of ER-BUP may improve tolerability of discontinuation over SL-BUP as the increased half-life eliminates the fluctuation in daily concentration and decreases in a self-tapered manner. **Patient History:** The patient is a 59-year-old white male with significant past medical history of post-traumatic stress disorder (PTSD) and OUD in remission treated with sublingual buprenor-

phine (SL-BUP) since 2009. The patient had been stable on a total daily dose (TDD) < 8 mg SL-BUP since April 23, 2019 and slowly tapered down to a TDD of 3 mg by November 29, 2021. A TDD of < 3 mg precipitated flu like symptoms, abdominal cramps, and restless legs which the patient was unable to tolerate causing the return to 3 mg TDD of SL-BUP. On March 11, 2022, this patient received a one-time subcutaneous injection of 100 mg ER-BUP with the simultaneous discontinuation of SL-BUP use. The patient reported feeling lethargic after the injection which resolved in two days. Five months post-injection the patient reported worsened restlessness and nightmares with sleep which resolved with restarting clonidine. Seven months post-injection this patient endorsed no other withdrawal symptoms, cravings for or return to use, and SL-BUP was not resumed. **Conclusion:** In this case ER-BUP was successfully used to improve the tolerability of tapering to discontinue buprenorphine in a patient who was unable to discontinue SL-BUP due to intolerable withdrawal symptoms.

Use of Asenapine in a Patient Concerned About Weight Gain with Olanzapine

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Type: Therapeutic Case Report. **Background:** Atypical antipsychotics are treatment options for bipolar disorder. Studies suggest olanzapine is associated with the most weight gain, while asenapine has a lower likelihood. This case describes a patient who was successfully cross-titrated from olanzapine to asenapine. **Patient History:** A 37-year-old female with a history of bipolar 1 versus schizoaffective disorder was admitted under temporary detention order with symptoms of acute psychosis including erratic behavior, paranoia, and delusions. Two months earlier, lithium and olanzapine were initiated after inpatient psychiatric hospitalization. Later, an outpatient provider discontinued olanzapine and initiated bupropion. Upon admission, she reported poor adherence to bupropion, self-discontinuation of lithium, taking mixed amphetamine salts, and drinking 1-2 bottles of wine per day. Her urine drug screen was negative at admission. Her basic metabolic panel, complete blood count, and vital signs were within normal limits other than mild hypokalemia (3.5 mEq/L), elevated blood pressure (146/100 mmHg), and tachycardia (106 bpm). Due to concerns of psychosis, bupropion and lithium were discontinued permanently. On day 2, olanzapine was reinitiated and titrated over 8 days. During olanzapine titration, insight improved, however, she continued to experience blunted affect with depressed mood and concern for weight gain reporting plans to stop olanzapine after discharge. On day 11, olanzapine was cross-titrated to asenapine 10 mg sublingual twice daily over 4 days which she tolerated well. During titration, she had significantly improved insight with appropriate affect and behavior. Upon discharge on day 15, she reported consuming 100% of meals, complete resolution of hallucinations and delusions, readiness to attend a substance use recovery program, and agreed to continue asenapine. **Review of Literature:** A PubMed search revealed one case report of switching from olanzapine to asenapine to reverse olanzapine-induced weight gain in a patient with schizophrenia; however, none in bipolar disorder. A meta-analysis revealed asenapine had a lower likelihood of weight gain when compared to olanzapine. Therefore, this case report adds context to these findings. **Conclusion:** This case report suggests cross-titration to asenapine is an effective alternative for bipolar disorder in patients experiencing or concerned about olanzapine-induced weight gain.

Utilization of Extended-Release Buprenorphine Injection to Transition Off of Oral Buprenorphine/Naloxone for Opioid Use Disorder: A Case Series

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Type: Therapeutic Case Report. **Background:** Opioid use disorder (OUD) can be effectively treated with daily sublingual buprenorphine (SL-BUP). Despite its efficacy, SL-BUP has limitations including pill burden, adverse effects, stigma, frequent provider follow up, and medication dependence that results in many patients having an interest in discontinuing treatment. Patients often have a difficult time discontinuing SL-BUP due to cravings and withdrawal symptoms. Extended-release buprenorphine (XR-BUP) is a monthly subcutaneous injectable formulation of buprenorphine used to treat moderate to severe OUD that provides sustained buprenorphine plasma concentrations over the monthly dosing period. The use of XR-BUP may facilitate discontinuation of SL-BUP by mitigating cravings and withdrawal symptoms. This case series describes three cases of novel utilization of a single XR-BUP 100 mg injection to facilitate discontinuation of SL-BUP in patients with OUD. **Patient History:** The three male patients range from 29-62 years old with past medical histories significant for multiple mental health comorbidities. Prior opioid use included both prescribed and illicit opioid use. No patients had trialed other medications for Opioid Use Disorder (MOUD). The various reasons for wanting to discontinue SL-BUP include wanting to be completely opioid free, undesirable medication dependence, concurrent benzodiazepine use, and lost efficacy for pain. The patients had been on suboxone for 4-

12 years with max SL-BUP doses from 16-24 mg/day. The dose of SL-BUP was decreased to 2-6 mg/day prior to receiving XR-BUP. Two patients tolerated the injection without side effects and denied withdrawal. One of the patients reported adverse effects to the injection and withdrawal symptoms. All of the patients denied cravings for the 6-month period following the injection. **Review of Literature:** A literature search revealed one published case series describing three cases of patients successfully transitioning off SL-BUP following a one-time injection of XR-BUP. Outside of this case series, limited data exists regarding this novel utilization of XR-BUP. **Conclusion:** Utilization of a single XR-BUP injection may assist some patients in discontinuing SL-BUP for OUD. The decision to transition patients off of SL-BUP is individualized and more data is needed to determine which patients are most appropriate for this intervention.