2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Safety of Amiodarone Use for Atrial Fibrillation in Post-Operative SICU Patients

Author: Elma Abdulbaki

Primary Preceptor: Mary Jane Sullivan

Institution: Rush University Medical Center

Abstract:

Postoperative atrial fibrillation (POAF) is a common arrhythmic complication following surgery that is associated with increased morbidity and mortality, including a higher risk of stroke, heart failure, and recurrent atrial fibrillation. Treatment strategies for POAF include the use of amiodarone for rate and rhythm control. However, amiodarone is associated with multiple adverse events, including bradycardia, hypotension, QTc prolongation, and increased incidence of stroke. Currently, there is limited prospective data evaluating the short-term safety of amiodarone when used in the ICU setting specifically for post-operative patients.

The purpose of this study is to assess the safety of amiodarone use in POAF in non-cardiac and non-neurosurgery surgical ICU (SICU) patients by evaluating the incidence of adverse events associated with amiodarone administration during their SICU stay. This study is a single-center, retrospective, observational cohort study evaluating adult patients admitted to the SICU who develop new-onset POAF within 5 days following initial surgery or prior to SICU discharge.

Currently, the research is in progress. The results generated will be used to help guide the treatment of POAF in SICU patients. Conclusion is in process pending result analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparison of Inpatient Length of Stay Between Intravenous and Oral Corticosteroid Use in COPD Exacerbation

Author: Czes Agaton

Primary Preceptor: Jamie Leone

Institution: Saint Mary of Nazareth Hospital - Chicago Saint Mary of Nazareth Hospital

Abstract:

Purpose: To evaluate if there is a difference in hospital length of stay between oral versus intravenous corticosteroid use for the treatment of chronic obstructive pulmonary disease (COPD) exacerbation.

Methods: This was a retrospective chart review of adult patients with a COPD exacerbation diagnosis who received corticosteroids upon admission between July 1, 2023, to July 1, 2025. Patients were classified to oral or intravenous corticosteroid formulations. The primary endpoint was hospital length of stay. Secondary endpoints included treatment failure requiring intensive care unit (ICU) admission or death, new infection, and hyperglycemia.

Results: Of the 31 patients, the mean age was 70 years, 39% were women, and 29% had diabetes. The oral corticosteroid group consisted of 5 patients vs intravenous group with 26 patients. The average daily prednisone equivalence was 58.1 mg and 98.3 mg for the oral and intravenous group respectively. For the primary outcome, the average hospital length of stay was 4.2 days vs 4.8 days for oral versus intravenous corticosteroids (absolute difference, -0.6 days, 95% CI [3.9 to 5.5 days], p=0.42). Hyperglycemia occurred in 1 patient in the oral group and 6 in the intravenous group (absolute difference, -3 percentage points, 95% CI [0.08 to 0.37], p=0.88). There were no episodes of treatment failure (resulting in ICU admission or death) or new infections observed in either group.

Conclusion: Based on the results, there was no significant difference in hospital length of stay between oral and intravenous corticosteroid therapy; oral therapy may be associated with a lower hyperglycemia incidence, though this finding was not statistically significant.

Overall, the data is limited due to the small sample size and considerable variance in the number of patients per group.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Outcomes of Non-Renally Dose-Adjusted Paliperidone Long-Acting Injectables in an Inpatient Setting

Author: Ariane Aidedji

Primary Preceptor: Archana Jhawar

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose: This quality assurance project aims to evaluate the safety of paliperidone palmitate at standard loading dose in patients with both reduced and normal renal function in the inpatient setting. Current dosing guidelines recommend a reduced loading and maintenance dose in patients with a creatine clearance (CrCl) of 50 to 80mL/min and to avoid use if CrCl is less than 50mL/min. Pharmacokinetic data indicate that total clearance decreases by 32% in mild impairment, 64% in moderate impairment, and 71% in severe impairment. There are limited data indicating that these pharmacokinetic changes are clinically significant.

Methods: The project will be a retrospective chart review of patients who were started on paliperidone palmitate with standard dosing of 234mg IM on day 1 and 156mg on day 8 (+/ 4 days), separating into two groups: patients with reduced renal function and those with normal renal function between the timeframe of 2015 to 2024. A patient list will be generated based on initial inpatient orders for paliperidone palmitate 234mg deltoid injection and assessed to ensure they received the full loading dose. A chart review will be performed to identify patients who meet the inclusion and exclusion criteria. As there will likely be more patients with normal renal function, a random one-to-one inclusion of these patients with those with reduced renal function will be conducted. The primary outcome will be the incidence of extrapyramidal symptoms, and the secondary endpoint will be the number of injections until discontinuation, hospitalizations, and incidence of adverse effects. Data for primary and secondary outcomes will be collected through the electronic chart for 13 weeks (+/- 1 month) after the initial paliperidone palmitate administration.

Results: Pending

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Identifying Patient Characteristics and Service Utilization Patterns for Pharmacist-Provided Test-and-Treat Services in a Participating Chain Supermarket Community Pharmacy Setting

Author: Yara Albair

Primary Preceptor: Christina Cross

Institution: Jewel – Osco Pharmacies

Abstract:

Purpose

Pharmacist-provided test-and-treat services, which combine point-of-care testing with pharmacist-directed treatment, have expanded access to timely care for acute infectious conditions in community pharmacy settings. These services are particularly valuable for patients without a primary care provider or insurance coverage, while also appealing to insured patients seeking convenient, same-day care. The purpose of this study is to characterize patient demographics and utilization patterns of pharmacist-provided test-and-treat services across a large chain community pharmacy operating in Illinois.

Methods

This retrospective, observational study will include all patients who received pharmacist-provided test-and-treat services for group A Streptococcus pharyngitis, influenza (A and B), or COVID-19 at participating supermarket-based community pharmacy locations in Illinois between July 2023 and August 2025. Data will be extracted from the pharmacy's internal software system and de-identified prior to analysis. Variables collected will include patient age, gender, insurance status, ZIP code, service type, test result, service date, and store identifier. Descriptive statistics will be used to summarize patient characteristics and assess utilization patterns across service types and geographic regions.

Results

Data collection and analysis are currently in progress. Results will describe patient demographics, insurance status, and utilization trends for pharmacist-provided test-and-treat services across the participating pharmacy locations.

Conclusions

This study aims to establish a baseline understanding of which patient populations utilize pharmacist-provided test-and-treat services within a chain community pharmacy setting in Illinois. Characterizing utilization patterns may help inform future program development, staffing considerations, and service expansion strategies for community pharmacies offering test-and-treat services.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparison of Dosing Strategies of Levetiracetam for Seizure Prophylaxis in Patients with Traumatic Brain Injury

Author: Aya Alwan

Primary Preceptor: Andrew McInerney

Institution: Advocate Lutheran General Hospital

Abstract:

Background: Traumatic brain injury (TBI) affects around 1.7 million individuals annually in the United States and is associated with detrimental complications including seizures. Anticonvulsants are used prophylactically, with the 2024 Neurocritical Care Society Clinical Practice Guideline recommending levetiracetam as the preferred agent. However, no standardized dosing strategies currently exist, resulting in variability in both loading and maintenance dose regimens across institutions and among providers. This study aims to identify the most appropriate dosing strategy of levetiracetam to reduce seizure incidence in patients with TBI.

Methods: This is a retrospective chart review looking at different dosing strategies of levetiracetam for seizure prophylaxis at two institutions. It includes patients admitted from 11/1/2020 through 8/1/2025 with a diagnosis of TBI who received levetiracetam during the initial 7 days following TBI. Those with history of seizures, prehospital use of anticonvulsants, seizure onset prior to medication administration, aneurysmal subarachnoid hemorrhage, or catastrophic brain injury with death within 48 hours were excluded from the study. The primary outcome is the incidence of seizures within 7 days of a TBI. Secondary outcomes include hospital and intensive care unit length of stay, need for rescue therapy due to seizures, and discontinuation rates due to adverse drug reactions. Data collected will include the mechanism of injury, severity of brain injury, seizure type and method of diagnosis, dose of levetiracetam, duration of therapy, use of additional antiepileptic drugs, adverse drug reactions, and disposition at discharge. This study is approved by the Institutional Review Board.

Results: Results are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: To Weigh or Not to Weigh: Fixed vs Weight-Based 4F-PCC for Warfarin Reversal

Author: Melvin Anthony II

Primary Preceptor: Carol Heunisch

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose:

Four-factor prothrombin complex concentrate (4F-PCC) is commonly used for urgent warfarin reversal using weight-based dosing per the package insert. In December 2025, a fixed-dose 4F-PCC protocol was implemented across a five-hospital community health system to improve operational efficiency. This change was driven by emerging evidence suggesting fixed-dosing may provide effective hemostasis while reducing cost, preparation complexity, and time to administration. This evaluation compares weight-based dosing with fixed-dose 4F-PCC by assessing achievement of effective hemostasis per International Society on Thrombosis and Hemostasis (ISTH) criteria and goal INR of less than 1.4. Outcomes were stratified by bleeding indication to determine whether fixed dosing provides comparable clinical outcomes while supporting system-wide standardization.

Methods:

This quality improvement project was exempt from Institutional Review Board approval. A retrospective chart review from January 1, 2024 to July 31, 2025 was conducted on adult patients with an administered order of weight-based 4F-PCC. The primary objective was the percentage of patients achieving goal INR less than 1.4 within 24 hours of 4F-PCC administration. The secondary objective was percentage of patients with successful clinical outcomes, defined as effective hemostasis. Subgroups for both objectives were stratified by bleeding site (intracranial vs extracranial). Eligible patients received 4F-PCC for warfarin reversal in the setting of intracranial or extracranial bleeding, and had an INR greater than two prior to 4F-PCC administration. Exclusion criteria consisted of pregnancy as well as the following treatments: fresh frozen plasma (FFP) within six hours prior to 4F-

PCC administration, four units or greater of packed red blood cells infused within six hours, FFP after 4F-PCC administration but before the first repeat INR, and an additional 4F-PCC dose prior to the first repeat INR. Additionally, patients who expired less than 48 hours after 4F-PCC administration were excluded. Data analysis consisted of descriptive statistics pre/post-implementation of the fixed dosed protocol.

Results: Pending

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Cumulative Effects of Intravenous Antihypertensives in General Medicine Inpatients

Author: Adrian Bak

Primary Preceptor: Monika Hornung

Institution: Rush University Medical Center

Abstract:

Purpose

In the 2025 ACC/AHA Hypertension guidelines, recent literature has demonstrated that the treatment of asymptomatic severe hypertension, previously referred to as hypertensive urgency, with as-needed antihypertensives has led to higher incidences of negative adverse events. The guidelines define asymptomatic severe hypertension as a blood pressure of 180/120 mmHg without evidence of end-organ damage, with some listed examples being proteinuria, myocardial infarction, and albuminuria. The most notable type of adverse events present in the literature were ischemic events, such as acute kidney injury (AKI) and stroke. This effect was seen more with intravenous antihypertensives, with the incidence of these events increasing with each dose given. The purpose of this study is to evaluate if there is a cumulative effect of intravenous antihypertensive administration on the incidence of negative adverse events in adults patients admitted to general medicine units at Rush University Medical Center (RUMC).

Methods

This was a single-center, retrospective, observational cohort study. This study will include patients admitted on a general medicine floor who have received intravenous antihypertensives for the treatment of asymptomatic severe hypertension from January 1, 2025, to June 30, 2025. The primary outcome of this study is the composite endpoint of ischemic events, such as AKI and stroke, hypotension, ICU admission, and all-cause mortality. The secondary outcomes were the individual incidences of ischemic events, hypotension, ICU admission, and all-cause mortality. Results for continuous variables

were reported using student t-test and results for categorical data were compared using a chi-square or Fischer's Exact test.

Results

Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Assessing the Perceived Needs of Illinois Pharmacists for Successful Future Medications for Opioid Use Disorder (MOUD) Prescribing

Author: Emily Baranowski

Primary Preceptor: Christina Cross

Institution: Jewel – Osco Pharmacies

Abstract:

Purpose

The primary objective of this study is to identify the tools Illinois pharmacists need if preparing for prescribing MOUD. With the decline of available providers to prescribe medications for opioid use disorder (MOUD), pharmacists are being looked at as an avenue to close the gap in care. Currently California and Idaho allow their pharmacists to prescribe MOUD services and have started creating the pathway for the future of pharmacy. The secondary objective would be to assess current Illinois pharmacists' knowledge of MOUD guidelines. There is not currently any Illinois legislature evaluating pharmacists for this service.

Methods

The study is a survey-based, multi-center study that will be performed and managed using an online secure survey application, REDCap. Pharmacists with an active Illinois pharmacist license currently practicing as a pharmacist in the state of Illinois will be included. All of those who are not actively practicing in Illinois as a pharmacist will be excluded. Statistical analysis of study endpoints will be assessed using descriptive statistics while significant differences in responses to the survey will be assessed with chi-square tests. Survey questions will include the preferences of various forms of educational tools: in person classes, previously recorded material, and written material as well as medication specific questions about the medications available for MOUD.

Results

The IRB was approved mid-February and data collection is about to start. The survey will be open until March 31, 2026. The hope is to gain insight into what strategies, material, and presentation types the pharmacists of Illinois would prefer when receiving training for MOUD prescribing services.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Door-to-Needle Times with Tenecteplase versus Alteplase Administration

Author: Christopher Brunstetter

Primary Preceptor: Jacqueline Junker

Institution: Northwestern Medicine Delnor Hospital

Abstract:

Acute ischemic stroke (AIS) is a leading cause of long-term disability and mortality, requiring fast and effective treatment. Alteplase has been the standard of care for treating AIS, but its administration requirements risk dosing errors and treatment delays. Tenecteplase has shown comparable safety and efficacy to alteplase with simpler administration through a single intravenous bolus dose. Door-to-needle (DTN) times, defined as minutes from patient's hospital arrival to thrombolytic administration, are a crucial metric for assessing AIS treatment as faster times are linked to improved patient outcomes and reduced mortality.

This multicenter, retrospective cohort study compares DTN times in patients with AIS treated with either alteplase or tenecteplase. The study focuses on patients who received tenecteplase under the system-wide protocol implemented in March 2023, comparing their outcomes to patients treated with alteplase under the previous protocol. This study protocol received institutional approval from the Pharmacy Quality Improvement and Research Committee.

This study analyzes data from patients 18 years of age or older presenting with AIS treated with alteplase (April 1, 2020, to August 31, 2022) or tenecteplase (April 1, 2023, to August 31, 2025). Patients less than 18 years old, pregnant, inpatient at the time of stroke, receiving fibrinolytic therapy from an outside hospital or for non-stroke indications are excluded.

The primary objective is to compare DTN times between alteplase and tenecteplase. Secondary outcomes include changes in NIHSS scores from admission to 24 hours after thrombolytic administration, length of stay, and 7-day mortality. Safety endpoints include

the incidence of hemorrhage within 24 hours and errors in thrombolytic dosing. A sample size of 40 patients in each group was calculated based on previous trials, using an alpha of 0.05 and 80% power.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of the Therapeutic Enoxaparin Anti-Xa Monitoring Guideline within a Single Healthcare System

Author: Kara Marie Buenaventura

Primary Preceptor: Dylan Horton

Institution: OSF Healthcare Saint Francis Medical Center and OSF Healthcare Children's Hospital of Illinois

Abstract:

The primary purpose of this study is to describe the percent of patients receiving therapeutic enoxaparin for a minimum of 3 days with obesity and/or renal dysfunction (Body Mass Index >40 kilogram/meter2 and/or Creatinine Clearance <30 mililiter/minute) who may warrant monitoring with enoxaparin anti-factor Xa (anti-Xa) levels.

The secondary purpose will be to evaluate the populations who may most benefit from anti-factor Xa monitoring and evaluate if the degree of renal impairment and/or obesity impacts the need for enoxaparin dose adjustments.

This study is a multi-center, single healthcare system that will utilize patient information extracted from electronic medical records and look at the sites that have on-site laboratories capable of monitoring anti-factor Xa levels from January 1, 2020 – December 31, 2024. The patient's medical records will be extracted if the patient has received enoxaparin doses greater than 40 milligrams for at least 3 days during their inpatient stay. Pregnant patients, pediatrics, and those on hemodialysis or continuous renal replacement therapy will be excluded. After identifying these patients, further collection of data will include gender, age, height, weight, serum creatinine at initiation of enoxaparin, enoxaparin orders, and anti-Xa levels (value, ordering user, date and time). Bleeding complications will be measured by the number of blood products administered, an average drop in hemoglobin from initiation of enoxaparin treatment and lowest hemoglobin during treatment, and reversal agents' administrations during enoxaparin therapy. To evaluate the benefit from anti-Xa monitoring, patients with a Body Mass Index >40 kilogram/meter2 and/or Creatinine Clearance <30 milliliter/minute who received anti-Xa level monitoring will have their bleeding outcomes compared to patients who were not being monitored.

We hypothesize that these at-risk populations will have an increased risk of bleeding events, and those monitored with anti-factor Xa levels will require dose adjustments while on therapeutic enoxaparin.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Line-Dancing: Weighing Risks and Benefits of Peripheral Vasopressors

Author: Jacob Butler

Primary Preceptor: Darya Lough

Institution: Endeavor Health Swedish Hospital

Abstract:

Purpose: Historically, central venous catheters have been used for vasopressor administration to mitigate risks of extravasation and skin necrosis. However, central line placement poses risks and requires specialized personnel and equipment, potentially delaying treatment in critically ill patients. The 2021 Surviving Sepsis Guidelines suggest peripheral administration to avoid delays in medication usage. The primary concern of peripheral vasopressor use is the potential for local tissue injury due to extravasation. This study aims to evaluate the safety of vasopressor administration via peripheral catheters following the implementation of a peripheral vasopressor guideline in October 2025.

Methods: A single-center, pre-post study design at a community teaching hospital was utilized which included a retrospective pre-protocol phase (February 2, 2025 – August 15, 2025) and a prospective post-protocol phase (October 15, 2025 – February 28, 2026). The protocol consisted of enhanced monitoring during medication administration, established safe peripheral intravenous access criteria, and defined maximum infusion rate parameters. Patients included were adults aged 18 years or older and patients who received norepinephrine, phenylephrine, epinephrine, dopamine, or vasopressin during their hospitalization. Patients were excluded if vasopressors were initiated in the operating room or the post-anesthesia care unit but not continued on the floor, if vasopressors were ordered as part of organ procurement, if they had known hypersensitivity to a vasopressor, or had baseline limb ischemia. The primary outcomes were extravasation rates and central line-associated bloodstream infections. The secondary outcomes were protocol compliance, number of central lines avoided, time to first administered vasopressor, median and max vasopressor dose, and vasopressor infusion duration.

Results: Results are pending.

Conclusions: Prospective results are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Nephrotoxin Stewardship: Assessing the Current Nephrotoxin Burden in the Intensive Care Unit (ICU)

Author: Natalie Cairo

Primary Preceptor: Sarah Zavala

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose: The purpose of this quality improvement (QI) project is to evaluate the current nephrotoxin burden in ICU veteran patients at a VA Medical Center. The project will also help plan development of a nephrotoxin stewardship program to help providers easily identify and monitor patients at high risk for developing acute kidney injury (AKI) in the ICU.

Methods: The project was a retrospective chart-review. A list of patients admitted to the ICU between January 1,2020 and August 31, 2025 were electronically identified and reviewed for inclusion in the project. Patients were included if they met the following criteria: (1) patients at least 18 years old, (2) ICU length of stay 7 days or greater, and (3) patients with at least two SCr samples during ICU admission (within 24 hours and 7 days of ICU admission). Patients were excluded if they were diagnosed with end stage renal disease receiving renal replacement therapy prior to ICU admission or undergoing urologic surgical procedures. The primary endpoint is the calculated nephrotoxin burden drug-days which incorporates the amount of nephrotoxins received as well as duration of therapy. Secondary endpoints include daily serum creatinine levels, number, duration, and class of nephrotoxic medications received, need for renal replacement therapy, contributing AKI risk factors, required pressors within ICU admission, ICU length of stay, hospital length of stay, ICU mortality, hospital mortality, incidence of AKI (as defined by the Kidney Disease: Improving Global Outcomes (KDIGO) guidelines), and initial stage of AKI. Descriptive statistics will be used to analyze the data.

Results: pending

Conclusion: pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Retrospective Evaluation of Steroid Utilization for Pneumonia Treatment in the Critically Ill Population

Author: Cassandra Caringella

Primary Preceptor: Amina George

Institution: Advocate Lutheran General Hospital

Abstract:

Purpose: This study evaluated the effect of adjunctive steroid therapy versus no steroid therapy on clinical outcomes in patients admitted to the intensive care unit (ICU) with severe community acquired pneumonia (CAP) and real-world adherence to guideline endorsed steroid regimens. Risk factors associated with clinical failure were also assessed.

Methods: This retrospective evaluation included adults ≥18 years admitted to the ICU with CAP from January 1, 2024, to June 30, 2025. Patients with hospital- or ventilator-acquired pneumonia, viral pneumonia, recent systemic corticosteroid use (≥5 mg prednisone equivalent within 7 days), or steroid initiation for non-CAP indications were excluded. Clinical failure was defined as death attributed to CAP, failure to return to pre-morbid oxygen status or escalation of oxygen requirements within 4 days of ICU admission. Baseline characteristics were compared between groups; regression analysis was used to identify predictors of clinical failure.

Results: In total, 405 patients were included; 179 (44%) received steroids and 226 (56%) did not. Patients in the steroid cohort had higher rates of acute respiratory distress syndrome (ARDS) on admission, increased oxygen and vasopressor requirements, and longer ICU and hospital length of stay. Among patients meeting CAPE COD severe criteria, clinical success rates were higher in the non-steroid group versus the steroid group, 52.6% vs 61.7% (p=0.05). Within the steroid treatment group, only 62.6% of patients received steroids per guideline approved dosing strategies. Regression analysis identified older age,

higher SAPS-2 score, severe pneumonia classification, vasopressor use, and immunosuppression as predictors of clinical failure. Treatment with steroids was not independently associated with success.

Conclusion: In this real-world retrospective evaluation, adjunctive steroid therapy for severe CAP did not improve rates of clinical success. Variables associated with poorer outcomes were: advanced age, higher SAPS-2 score, severe pneumonia classification, vasopressor use, and immunosuppression.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluating the Efficacy of Metformin vs. GLP-1 Agonists for Metabolic Syndrome in Patients on Atypical Antipsychotics at a Veterans Affairs Medical Center

Author: Andrea Castro

Primary Preceptor: Shannon Menard-Okoroike

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose:

The purpose of this quality improvement project was to evaluate the impact of glucagon-like peptide-1 (GLP-1) agonists on antipsychotic-induced metabolic syndrome compared to metformin in patients receiving a second-generation antipsychotic at a Veteran Affairs (VA) Medical Center.

Methods:

The project was conducted at a VA Medical Center via retrospective chart review. Included patients were at least 18 years old and had a prescription for an atypical antipsychotic at a therapeutic dose, a concomitant prescription for metformin and/or GLP-1 agonist (semaglutide, tirzepatide, or liraglutide), and at least one of the following: type 2 diabetes mellitus (T2DM); body mass index (BMI) ≥30 kg/m2; BMI ≥27 kg/m2 with hypertension, T2DM, dyslipidemia, metabolic syndrome, obstructive sleep apnea, osteoarthritis, and/or metabolic dysfunction-associated steatosis liver disease. Patients were excluded if using other weight-loss medications during the study period, had no data available for baseline/follow-up weights in the defined timeframes, or were on stable metformin therapy for <3 months prior to GLP-1 agonist initiation. Data was collected from November 2, 2020 to June 30, 2025. The primary endpoint was change in weight at three months following treatment initiation. Secondary endpoints included change in weight at six months following treatment initiation and change in hemoglobin A1c, BMI, lipid panel components, fasting blood glucose, systolic blood pressure, and diastolic blood pressure at three and six months following treatment initiation. Additionally, collected data on the rate of

discontinuation, reported adverse drug events, and incidence of cardiovascular events within six months of treatment initiation.

Results/Conclusion:

Data analysis is ongoing; final results and conclusion will be presented at the meeting.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Assessing the Impact of the Medicare Prescription Payment Plan on Patient Adherence of Chronic Medications

Author: Bianca Chen

Primary Preceptor: Christina Cross

Institution: Jewel – Osco Pharmacies

Abstract:

Purpose:

Medication nonadherence is a complex healthcare issue that contributes to poor health outcomes by exacerbating medical conditions and increasing long-term healthcare costs. One significant barrier to adherence is out-of-pocket medication costs.

On January 1st, 2025, the Medicare Prescription Payment Plan (M3P) was initiated. This voluntary program allows patients to spread their prescription drug costs throughout the calendar year rather than paying for the full out-of-pocket cost at the pharmacy.

The primary objective of this retrospective cohort study is to compare patient adherence to chronic medications between Medicare patients enrolled in the M3P program and those not enrolled in the program. Secondary objectives include stratifying this data to determine what populations benefit most from the M3P, as well as identifying the proportion of Medicare patients not enrolled in M3P who discontinue on medications and are not initiated on a different medication of the same indication, patients who initiate on the M3P and later discontinue the program, and patients who get flagged as one who would benefit from the program by the pharmacy software and enroll in the program.

Methods:

Data including patient demographic information, M3P enrollment, and prescription information will be collected from a sample of Medicare patients enrolled in M3P and Medicare patients not enrolled in M3P who had at least one prescription for a studied indication billed to a Medicare plan and filled at a chain community pharmacy between

January 1st, 2025 and January 1st, 2026. The medication classes studied include diabetes medications, renal-angiotensin-aldosterone-system (RAAS) inhibitors, and anticoagulants. Adherence will be defined by proportion of days covered (PDC) and comparisons will be analyzed using linear regression to account for potential confounders.

Results/Conclusion: Research in progress.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: The Impact of Automated Insulin Dosing Software on Glycemic Outcomes within a Large Health System

Author: Maria Cherry

Primary Preceptor: Lara Fetzer

Institution: Northwestern Memorial Hospital

Abstract:

Introduction: The automated insulin dosing software is a glucose management system designed to help healthcare institutions manage blood glucose for patients receiving insulin therapy. Clinical trials have shown positive glycemic outcomes when patients on insulin infusions are managed with this software. The Centers for Medicare and Medicaid Services has established quality measures to improve glycemic control in patients with diabetes in the healthcare system. All but two hospital sites within the health system use the automated insulin dosing software to manage glycemic control for patients in the intensive care unit receiving insulin infusions.

Objectives: To compare the number of hypoglycemic events per 1000 patient-days among patients receiving insulin infusions managed with the automated software versus standard institutional protocols. Secondary endpoints include analyzing the number of severe hypoglycemic events per 1000 patient-days, the number of hypoglycemic interventions per 1000 patient-days, the number of hyperglycemic events per 1000 patient-days, length of hospital stay, and unplanned 30-day readmission rates. Outcomes will be compared between patients managed with the automated insulin dosing software versus standard institutional protocols for various hospital sites.

Methods: Inclusion criteria includes patients 18 years of age or older who received an intravenous insulin infusion for any indication from September 4, 2024 to September 4, 2025.

Conclusions: In process and will be presented at the ILPRC meeting

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: The Management of Opioid Use Disorder in Urban Emergency Departments in Safety-Net Hospitals

Author: Milton Childs

Primary Preceptor: Zibin Zhang

Institution: Mount Sinai Hospital Medical Center

Abstract:

Opioid-related mortality remains a major public health concern, with approximately 76% of overdose deaths involving opioids, according to the CDC (2025). Studies have shown that emergency department (ED) initiation of medications for opioid use disorder (MOUD) improves treatment engagement and reduces morbidity. In Chicago, opioid-related mortality in communities served by a 2-hospital health system, including North Lawndale (97 deaths per 100,000) and Chicago Lawn (30 per 100,000), far exceeds the national average (15 per 100,000), underscoring the need for system-level interventions. This study evaluates the impact of implementing a pharmacist-developed, ED-specific MOUD order panel designed to standardize opioid withdrawal management, optimize symptom control, and increase appropriate MOUD utilization. The primary objective is to evaluate changes in ED opioid withdrawal management following order panel implementation.

This is a retrospective pre- and post-implementation chart review that was conducted across two EDs within a hospital system. The baseline analysis included 97 encounters from May–July 2025. An ED-specific MOUD order panel, approved by the Pharmacy and Therapeutics Committee in September 2025, incorporated standardized MOUD dosing, Clinical Opiate Withdrawal Scale (COWS)–guided therapy, and supportive medications. This was followed by multidisciplinary ED staff education. In November 2025, the results were presented at the Opioid Stewardship Committee meeting. Post-implementation data is being collected from January–March 2026.

Adults ≥18 years who received methadone or buprenorphine for opioid withdrawal during the study periods were eligible. Encounters required documented COWS assessments. Incarcerated patients were excluded. Data extracted from the electronic health record included MOUD agent, dose, frequency, COWS scores, and rescue medication use.

Descriptive statistics will summarize prescribing patterns and withdrawal management practices.

Post-implementation data collection and analysis are currently underway. Final results will be shared once the data have been compiled, and the conclusion will be presented once analysis is finished.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Assessing the Impact of a Transitional Care Pharmacist on Diabetes Outcomes

Author: Ashley Choi

Primary Preceptor: Sara Al Azmeh

Institution: Northwestern Memorial Hospital

Abstract:

Background: Lack of or delayed outpatient follow-up after hospitalization remains one of the greatest contributors to readmission and increased healthcare costs. For diabetes-related hospitalizations, the American Diabetes Association (ADA) recommends outpatient follow-up within at least 30 days or 1-2 weeks for patients with uncontrolled hyperglycemia. Data has shown the positive impact of pharmacist intervention post-discharge on glycemic control with both HbA1c reduction and medication optimization for comprehensive care. A Transitional Care clinic was established within the hospital system to bridge patients with lack of outpatient follow-up to full-time care following hospital discharge. A full-time pharmacist role was started in July of 2023, but the clinical impact of this position has not yet been studied. The goal of this project is to assess the impact of a clinical pharmacist on diabetes outcomes within a Transitional Care clinic setting.

Methods: This is a single-center, retrospective cohort study of patients with diabetes seen by the clinical pharmacist from July 17th, 2023, to August 28th, 2024. Patients will be excluded if <2 visits were completed with the pharmacist, HbA1c was < 8.0% at baseline, or HbA1c was not repeated before transitioning over to a long-term primary care provider. The primary outcomes will include the number of patients readmitted/seen in the emergency department for diabetes-related causes within 30 days, as well as the change in HbA1c from baseline to launch. Secondary outcomes will include time to HbA1c < 8.0%, as well as the number of patients either initiated on a continuous glucose monitor (CGM), statin therapy, cardiorenal protective therapy or provided medication access support.

Results/conclusion: Results are pending at time of submission and will be presented during the conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of a Clinical Pharmacist Follow Up Questionnaire for Patient's Receiving Oral Oncolytics

Author: Hillary Debs

Primary Preceptor: Enela Aliaj

Institution: Northwestern Memorial Hospital

Abstract:

Overview/Background: The increasing use of oral oncolytics introduces challenges related to adherence, side effect monitoring, and ongoing patient support, often requiring significant pharmacist involvement. To improve workflow efficiency and maintain high quality patient care, a follow up questionnaire was developed to gather comprehensive patient reported information. The tool assesses medication details, adherence, new medications or allergies, side effects, quality of life changes, and recent hospital or emergency department visits. Its structured format aims to streamline monitoring, enhance documentation, and ensure patients receive appropriate follow up while optimizing limited staffing resources.

Methods: This retrospective utilization study will analyze patients 18 years or older who received oral oncolytics between June 1st, 2025, and August 31st, 2025. Eligible patients must be active on our patient health record portal and have received at least one prior pharmacist follow up call. Patients with therapy related flags (e.g., dose adjustments, alterations in treatment plan) or those who opted out of pharmacist follow up will be excluded.

Outcomes/Impact: The primary outcome will be the completed questionnaire response rate (%). Secondary outcomes include the number and type of pharmacist interventions prompted by questionnaire responses, time to patient response, the proportion of patients who viewed but did not complete the questionnaire, response rates stratified by age and cancer type, reported nonadherence, and reported treatment related side effects.

Key Takeaways: Findings will characterize the utility of the oral oncolytic questionnaire and identify how responses can guide targeted pharmacist interventions related to adherence,

symptom management, medication review, and provider communication. This evaluation will help determine the questionnaire's role in supporting efficient, patient centered oncology pharmacy care.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Daptomycin MIC on Treatment Outcomes in Patients with Vancomycin-Resistant Enterococcus (VRE) Bloodstream Infections (BSI)

Author: Riya Desai

Primary Preceptor: Caleb Rux

Institution: Loyola University Medical Center

Abstract:

Purpose: Vancomycin-resistant Enterococcus faecium (VRE) is a leading cause of hospital-acquired infections, especially in immunosuppressed and critically ill patients. Although daptomycin remains one of the first-line treatment options, its clinical efficacy against isolates with elevated MICs is uncertain despite the revised Clinical and Laboratory Standards Institute (CLSI) susceptible dose-dependent (SDD) breakpoint of < 4 mcg/mL. Prior studies have reported mixed findings, with some demonstrating higher failure rates at elevated MICs within the SDD category and others showing no significant differences in mortality or microbiologic outcomes. The purpose of this study is to evaluate the clinical efficacy of daptomycin in treating BSI caused by VRE isolates with an MIC of 4 mcg/mL compared to those with an MIC less than 4 mcg/mL.

Methods: This is a retrospective cohort study conducted at an academic medical center. Patients admitted between January 2017 and December 2024 who had a positive blood culture with E. faecium with a daptomycin MIC < 4 mcg/mL and were treated with daptomycin were included. The primary composite endpoint was treatment failure within 90 days of daptomycin initiation, defined as the occurrence of any of the following: all-cause mortality, breakthrough VRE infection, emergence of daptomycin resistance while on therapy, and infection related hospital readmission. Secondary endpoints included time to microbiologic clearance, hospital length of stay, length of treatment, CPK elevation, and daptomycin discontinuation due to adverse events.

Baseline characteristics will be reported using descriptive statistics. Categorical variables will be compared using chi-square or Fisher's exact tests, and continuous variables using t-

tests or Mann–Whitney U tests. The primary composite outcome will be analyzed using chi-square testing, with multivariable logistic regression performed to adjust for potential confounders. Data will be analyzed using Microsoft Excel and SPSS.

Results are pending and will be included at the time of presentation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparing Safety Profiles of Calaspargase pegol-mknl and Pegaspargase: A Retrospective Analysis of Adverse Events in Acute Lymphoblastic Leukemia Treatment

Author: Samantha Despines

Primary Preceptor: Craig Magarity

Institution: OSF Healthcare Saint Francis Medical Center and OSF Healthcare Children's Hospital of Illinois

Abstract:

Purpose: Since the adoption of Calaspargase pegol-mknl there has been a perceived anecdotal increase in adverse drug events (ADEs) with Calaspargase pegol-mknl compared to Pegaspargase. Based on the information known about the medications, the most concerning ADEs would be elevated liver function tests (LFTs), pancreatitis, and deep vein thrombosis (DVT).

Primary outcomes of the study include comparing the incidence rate of Grade 3 or greater ADEs including pancreatitis, hepatotoxicity, and DVT. Secondary outcomes will be to evaluate the number of patients who experienced an anaphylactic reaction to either Pegaspargase or Calaspargase pegol-mknl and subsequently required a switch to Asparaginase erwinia chrysanthemi recombinant-rywn or to Asparaginase erwinia chrysanthemi. Subgroup analysis of the incidence of each Grade 3 ADE separately of pancreatitis, hepatotoxicity, and DVT will also be completed.

Methods: Retrospective chart review of patients aged 1 month to 35 years treated for acute lymphoblastic leukemia (ALL) at a pediatric hematology/oncology specialty clinic within a tertiary pediatric hospital or the affiliated tertiary academic medical center. They also had to have received Pegaspargase from January 1st 2017 through June 30th 2021 or Calaspargase pegol-mknl from January 1st 2021 through June 30th 2025 to be included.

Data collection will occur after IRB approval and after the data pull is received from healthcare analytics, a manual chart review for any missing data or data that needs to be clarified will be completed. The data will then be sent to a statistician to assist with the project's statistics.

Results/Conclusion: Results and conclusions are pending, but they will be available at the time of the presentation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: The Impact of Endocrinology Clinical Pharmacist Practitioner on Weight Management Outcomes at a VA Medical Center

Author: Haylie Dickson

Primary Preceptor: Leydi Sanchez

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose: Obesity is a complex, yet common disease in the United States that is estimated to impact around 42% of adults. For the veteran population, the number was estimated to be 78% from data collected in 2014. With increasingly high rates of obesity in the veteran population, the responsibility of treatment and management of the condition has expanded to include clinical pharmacist practitioners (CPPs) intervention. The purpose of the project is to assess weight outcomes for veterans referred to the endocrinology CPP compared to those who were not referred to the endocrinology CPP.

Methods: This project will identify patients at the Veterans Affairs (VA) Medical Center who were seen by the endocrinology clinical team for weight management and had at least one clinic visit between the dates of June 1st, 2024, through June 1st, 2025. Patients will be included if they have been initiated on a glucagon-like peptide-1 (GLP-1) or glucagon-like peptide-1/gastric inhibitory peptide (GLP-1/GIP) during study timeframe. Patients will be excluded if they do not have a documented baseline weight (kg) within the 24 weeks prior to the first visit and without a documented final weight (kg) at least 4-24 weeks after the last visit. A list of patients will be identified by the pharmacy informatics team based on the inclusion criteria. Data for the primary endpoint, secondary endpoints, exploratory endpoints, and subgroup analysis will be evaluated through chart review in the electronic health record between January 1st, 2024, and December 1st, 2025. Approximately 200 patients will be randomized for chart review and data analysis. Data for the primary, secondary, exploratory endpoints, and subgroup analysis will be analyzed using a two tailed t-test and Chi Square/Fischer's Exact test as appropriate through an online statistics website.

Results: Pending data analysis

Conclusion: Pending data analysis

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Polypharmacy Review in Medication Deprescribing in a Geriatric Clinic

Author: Alicia Dinh

Primary Preceptor: Charity Anicete-Pena

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

The purpose of this quality improvement (QI) project is to evaluate and describe the impact of polypharmacy review in the deprescribing process within a geriatric clinic at a Veteran Affairs Medical Center. The results of this project will show how pharmacist-led medication review can assist in reducing polypharmacy in the geriatric population. The data collected from this project can help expand pharmacy services in other clinics where polypharmacy is prevalent. The QI project is an evaluation of the polypharmacy review initiative at a Veteran Affairs Medical Center geriatric clinic. Data collection will be completed using the electronic health record and deprescribing dashboards. Patients seen in the geriatric clinic from January 1, 2024 to May 31, 2025 and with a polypharmacy review note by a Clinical Pharmacist Practitioner (CPP) will be identified using a primary care deprescribing dashboard. Patients that have less than five medications and who have no-showed geriatric clinic appointments after polypharmacy review will be excluded from the project. The primary endpoint will be the number of medications deprescribed after polypharmacy review. Additional endpoints that will be assessed will be CPP recommendations made per visit, potentially inappropriate medications per Beers Criteria, medication discontinuation reason, drug class of deprescribed medications, and cost avoidance within a geriatric clinic. Baseline characteristics will be collected based on most recent data within 6 months of the polypharmacy review note. The number of medications discontinued will be evaluated by reviewing the primary care provider/geriatric clinic note and medication list report. When analyzing the discontinued medications, information regarding drug class, indication, dose, duration, frequency, and discontinuation reason will be collected. Results and conclusion are pending. Descriptive statistics will be used to analyze data.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Step Therapy Utilization Management Outcomes: A Retrospective Review of Denosumab for the Treatment of Osteoporosis

Author: Matthew Dini

Primary Preceptor: Lena Kwan

Institution: Advocate Health IL & WI Divisions Advocate Health IL & WI Divisions

Abstract:

Purpose: To determine the clinical and financial impacts of step therapy utilization management strategy for denosumab used for management of osteoporosis.

Utilization management strategies are policies designed to contain health care costs by limiting use of high-spend interventions to cases where they are clinically justifiable. Ideally, they reduce expenditure without diminishing quality of care. Osteoporosis is a disease characterized by bone porosity, decreased bone mineral density, and increased bone fracture risk. Such fractures represent a substantial threat to wellbeing owing to hospitalization, lengthy recoveries, and rehabilitation. Osteoporosis care represents a significant economic burden to the health care system. Denosumab step therapy policy is designed to redirect lower-risk patients to less costly agents and preserve direct access to relatively high-cost denosumab for qualifying patients.

Methods

We performed a retrospective review within a non-profit integrated health system to assess denosumab step therapy policy impact on bone mineral density, fracture incidence, and medical spend relating to osteoporosis ICD-10-CM diagnosis codes among patients belonging to health plans with risk contracts. Retrospective chart review and financial analysis were conducted of patients for whom denosumab medical prior authorization referrals were submitted from policy implementation (July 26, 2023) through July 26, 2024. 140 patients qualified for clinical and financial analysis based on indication of

osteoporosis or osteopenia. DEXA scan changes and fracture incidence were assessed through December 16, 2025. Finance data were available through November 30, 2025. Patients with approved referrals were compared with patients who did not meet approval criteria during the review period. Members of the organization's team member health plan and those with fee-for-service Medicare coverage were excluded. Data were captured using REDCap and analyzed in Excel and R version 4.5.2. This project was approved by the organization's institutional review board as not human subjects research.

Results

Research in progress

Conclusions

Research in progress

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Pharmacist Led Warfarin Management Consults and Related Interventions

Author: Yaewon Do

Primary Preceptor: Verina Botros

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose: Pharmacist led inpatient warfarin dosing improves anticoagulation outcomes and reduces complications. At four community hospitals within a larger health system, the institutional guideline provides initial and daily dosing for warfarin-naïve patients based on INR, with weekly adjustments for steady-state. Inpatient pharmacists within this system only adjust warfarin daily based on INR. This evaluation aims to assess guideline utilization & to identify improvement to align guidelines with clinical expertise.

Methodology:

This quality improvement project retrospectively analyzed electronic records for pharmacist led consults in chronic and naïve warfarin patients admitted April 1 to June 30, 2025, excluding those with supratherapeutic INR at time of consult. The primary objective included the percentage of inpatient days chronic patients remained in goal. Secondary objectives included percentage of days naïve dosing aligned with guidelines; days naïve patients received non-guideline doses with ≥ 1-3 sensitivity risk factors; percentage of warfarin naïve patients therapeutic by day 5 or discharge (if earlier). Data collected included daily INR, warfarin doses, predefined warfarin sensitivity factors, INR goal range, drug interactions. Data was analyzed using descriptive statistics. Preliminary results showed chronic patients achieved similar therapeutic INR days as existing studies. However, secondary objectives showed naïve warfarin patients did not often align with guideline dosing chart, most due to warfarin sensitivity factors. With these results highlighting the patient variability and lack of guideline applicability, enhancing the institutional warfarin guideline to provide daily dose adjustment recommendations and examples of scenarios which deviate from standard warfarin dosing may help adaptability

in practice and provide additional guidance. All inpatient pharmacists within the health system received a survey to assess percentage who use the guideline and changes that may encourage use. Survey results will ensure ongoing discussions with stakeholders will produce most effective modifications to improve patient care and safety.

Results:

pending

Conclusions:

pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Use of Vasopressin in Patients with Acute Burn Injury

Author: Kaelyn Dwyer

Primary Preceptor: Shannon Kuhrau

Institution: Loyola University Medical Center

Abstract:

Purpose: Patients with acute burn injury experience multiple shock states, including hypovolemic, septic, and burn shock. Burn shock is an aseptic, inflammatory response following severe acute burn injury that exhibits characteristics of cardiogenic, distributive, and hypovolemic shock. Norepinephrine is commonly used as a first-line vasopressor for the treatment of shock in this population; however, the release of endogenous catecholamines in burn shock is hypothesized to downregulate and saturate adrenergic receptors, suggesting that norepinephrine may be less effective in patients with acute burn injury. Vasopressin, a non-catecholamine vasopressor, offers an alternative mechanism of action that avoids exogenous catecholamine use, supporting its use in initial vasopressor selection. The purpose of this retrospective study is to evaluate vasopressin compared to norepinephrine as a first-line vasopressor for shock in patients with acute burn injury.

Methods: This is a retrospective cohort study of adults with cutaneous burn injury who were admitted to the Burn Intensive Care Unit (ICU) at an academic medical center from August 1, 2015 to August 31, 2025. Patients who received both vasopressin and norepinephrine for the treatment of shock were reviewed. Patients treated with more than two vasopressors or found to have inhalation injury alone were excluded. Patients with vasopressin initiated first were compared to patients with norepinephrine initiated first. Baseline characteristics include mechanism of burn, percent total body surface area affected, type of shock state, sequential organ failure assessment (SOFA) score, and operating room procedures. The primary endpoint is time to shock resolution. Select secondary endpoints include time on vasopressors, time to initiation of second agent, dose of initial vasopressor at initiation of second agent, mortality, and length of stay. A multivariate linear regression will also be used to determine independent risk factors of

time to shock resolution. Results to be presented at the Illinois Pharmacy Residency Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Implementation of Pharmacy Glycemic Management Protocol Changes to Achieve Blood Glucose Levels Between 70-180 mg/dL

Author: Naomi Egharevba

Primary Preceptor: Roshani Patel

Institution: UChicago Medicine AdventHealth La Grange UChicago Medicine AdventHealth

Abstract:

Purpose: Per 2024 CDC National Diabetes Statistics Report, 22% of all hospitalized patients experience hyperglycemia during hospitalization. Current American Diabetes Association (ADA) guidelines recommend critically ill hospitalized patients blood glucose (BG) management goal of 140-180 mg/dL, hypoglycemia is defined as BG < 70 mg/dL and hyperglycemia as BG ≥ 180 mg/dL. The institution protocol aims to maintain euglycemia by optimizing insulin dosing regimen and preventing both hypo- and hyperglycemic events. The purpose of this study is to identify strategies to maximize blood glucose levels between 70-180 mg/dL by optimizing the effectiveness of current pharmacist-driven glycemic management protocol.

Methods: This retrospective chart review evaluates pharmacist management of type 1 and type 2 diabetes via implementation of basal, bolus, correctional insulin, and appropriate consistent carbohydrate diet. Data was collected from September 9th, 2025, through February 24th, 2026. All patients ≥ 18 years old with blood glucose ≥ 300 mg/dL, two blood glucose readings ≥ 180 mg/dL and/or blood glucose readings < 70 mg/dL while on insulin automatically qualify for pharmacist management. All patients < 18 years old, diagnosed with gestational diabetes/pregnant, active endocrinology consultation, and on insulin infusions or pump were excluded. Data is collected across four four community teaching hospitals using EHR and data collection spreadsheet. Data includes fasting, pre-prandial and bedtime blood glucose readings, insulin types and units administered. Data is analyzed using paired T-tests. The primary outcome is an average change in blood glucose following pharmacist intervention. Secondary endpoints include consistency of carbohydrate-controlled diet, number of hypoglycemic and severe hyperglycemic events, and management of steroid-induced hyperglycemia.

Results: Pending

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Improving Vaccination Compliance in Post-Splenectomy Patients

Author: Abbey Elkins

Primary Preceptor: Anmin Wang

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose:

Post splenectomy patients are at an increased risk for severe infections caused by encapsulated bacteria including Streptococcus pneumoniae, Neisseria meningitidis, and Haemophilus influenzae. Current CDC guidelines recommend vaccination with pneumococcal, meningococcal serotype B and serotype ACWY, and Haemophilus influenzae type b vaccines in asplenic patients. A retrospective five-year review at this community health system revealed a 93% vaccine prescribing rate in the immediate post-splenectomy period, with 14% of those patients eventually completing their entire vaccine series. Pharmacist vaccine recommendations occurred in 83% of post-splenectomy patients and patient counseling was documented in 3%. This initiative aims to improve the vaccine series completion rates in post-splenectomy patients by optimizing pharmacist involvement through patient counseling and providing educational materials for both patients and providers on the necessary vaccines.

Methods:

This evaluation is a quality improvement project exempt from review by the Institutional Review Board. Vaccination data of patients who received a splenectomy at this community health system was reviewed and an intervention was developed in collaboration with physicians and infectious disease pharmacy specialists to improve patient completion rates of indicated vaccine series through pharmacist led education. The pharmacist workflow was updated to include documentation of patient counseling. A chart with due dates for vaccine boosters and patient resources on where to obtain vaccinations were added to the pharmacist progress note, and the note contents were optimized using patient friendly language to allow for the note to be distributed as patient educational

material. Pharmacist education on the updated workflow and progress note was implemented through distribution of an educational flyer with both virtual and in-person training sessions. Post-implementation data collection will include the rate of documented pharmacist vaccine recommendations and patient counseling for post-splenectomy patients. Results will be analyzed using descriptive statistics.

Results and conclusions pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Argatroban and Bivalirudin for Suspected Heparin Induced Thrombocytopenia

Author: Aaliyah Escamilla

Primary Preceptor: Zena Darhoom

Institution: Endeavor Health NorthShore Hospitals Endeavor Health NorthShore Hospitals

Abstract:

Purpose:

Heparin-induced thrombocytopenia (HIT) is an immune-mediated, prothrombotic disorder that requires timely recognition and management. Diagnosis is guided by clinical evaluation with the 4T score, supported by laboratory confirmation when appropriate. For patients with a 4T score below 4, guidelines advise against further testing or alternative anticoagulation due to a 99.8% negative predictive value for HIT. Delays in confirmatory testing, such as send-out serotonin release assays (SRA), and inconsistent familiarity with diagnostic algorithms may result in unnecessary use of expensive non-heparin anticoagulants. This project evaluated argatroban and bivalirudin utilization for suspected HIT within a community health system, examined adherence to guideline-recommended diagnostic practices, and identified opportunities to improve care while reducing avoidable medication costs.

Methods:

This quality improvement project was exempt from Institutional Review Board approval. A retrospective chart review was conducted for adult patients who received argatroban or bivalirudin empirically for suspected HIT across five hospitals within a community health system between June 1, 2024, and May 31, 2025. Patients were excluded if they had a known history of HIT, documented heparin allergy, or heparin resistance. Data collected included manually calculated 4T scores, heparin-induced platelet activation (HIPA) and SRA results with turnaround times, and estimated drug costs based on average wholesale pricing. HIT status was determined based on laboratory testing. Patients were considered

HIT-positive when both HIPA and SRA were positive, or when SRA was not performed after a positive HIPA result. Descriptive statistics were used to assess anticoagulant prescribing patterns, rates of low 4T scores or negative HIT tests, and associated empiric therapy costs. Analysis revealed most empirically treated suspected HIT patients had low 4T scores and negative tests, with delayed SRA results prolonging therapy and increasing costs. Implementation strategies focused on provider education, reinforcement of guidelines, and assessing the feasibility of in-house SRA testing to reduce inappropriate empiric anticoagulation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Ambulatory Care Pharmacist Interventions on Electronic Prescribing Workflows

Author: Ashley Fanco

Primary Preceptor: Sylvia Ou

Institution: Rush University Medical Center

Abstract:

Purpose:

Medication errors are among the most frequent and preventable causes of patient harm, with an estimated 1.5 million individuals affected annually in the United States. A significant portion of these errors occur during the prescribing phase, often due to unclear instructions, incorrect quantities, and/or inappropriate drug selection. This quality improvement project aims to assess the impact of ambulatory care pharmacists on computerized provider order entry (CPOE) systems at Rush Medical Group, which is the network of clinics associated with Rush University System for Health. Ambulatory care pharmacists at Rush Medical Group identified recurring issues within electronic prescriptions and subsequently submitted over 100 tickets to update default prescribing parameters for more than 300 prescription orders.

Methods:

The project will retrospectively evaluate the submitted tickets and associated prescription orders (also known as “ERXs”) to assess changes in prescribing efficiency and workflow optimization. In addition, a survey of clinical staff (e.g., providers and nurses) will be conducted to assess perceptions of prescribing efficiency, usability of CPOE workflows, and perceived impact on patient safety following implementation of the pharmacist-led interventions. The primary outcome is change in order completion time per prescription

after ERX modifications. Secondary outcomes include responses to survey questions and the number and type of CPOE updates implemented, such as new orders and panels created, adjustments to default prescribing options (e.g., dose, route, frequency, dispense quantity), additions of warnings, removal of discontinued products, and modifications to drug-drug interaction severity levels. Additionally, the study will quantify the frequency of incorrect dose/frequency/quantity entries and alert utilization, including “Alternative Selection” and “Drug Interaction” alerts, as well as utilization of developed order panels versus individual orders. Outcomes before and after ERX changes will be summarized using descriptive statistics, including mean, median, and standard deviation. No formal hypothesis testing was performed.

Results: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Sodium-glucose cotransporter-2 inhibitor use in hospitalized patients

Author: Pearl Feng

Primary Preceptor: Lisa Patel

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose: Despite the mortality benefit in heart failure and reduction of rehospitalization, sodium-glucose cotransporter-2 inhibitors (SGLT2i) may be underutilized in hospitalized patients. The potential for adverse drug reactions, such as euglycemic diabetic ketoacidosis (DKA) paired with recommendations against utilization for inpatient glycemic control complicates SGLT2i use. Current institutional guidelines for SGLT2i use requires approval by either endocrinology or cardiology providers. Clinical decision support (CDS) notifies providers and pharmacists of current lab values, the ordering restriction and the risk of euglycemic DKA. However, recent guidelines and published research highlight the benefit of SGLT2i use in hospitalized patients, as well as the negative impacts of abrupt cessation. In addition to this information, requests to remove ordering restrictions prompted a formal review of the guideline and current usage.

Methods: After an evaluation of current literature, a retrospective medication use evaluation (MUE) was utilized to evaluate if patients prescribed a SGLT2i prior to admission (PTA) were continued while hospitalized. Patients admitted at one of five hospitals in this health system from January 1, 2025, to June 30, 2025 were assessed. Roughly half of the patients evaluated, were continued on PTA SGLT2i while hospitalized. Additionally, administration of a SGLT2i during periods of no oral intake status (NPO) or within 72 hours prior to elective procedure were assessed. The current hospital guideline will be updated to remove ordering restrictions and shift to use of clinical guidance based on patient specific scenarios. Existing CDS will be updated to remove restrictive language and additional CDS will be instituted to mitigate risk of inappropriate administration in cases of prolonged NPO status or planned procedure. A post- implementation audit of SGLT2i usage will be conducted.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Weight-Based Dosing of Propofol and Dexmedetomidine Infusions in Overweight and Obese Mechanically Ventilated Critically Ill Patients

Author: Alexis Figueroa

Primary Preceptor: Basirat Gbemikaiye

Institution: Mount Sinai Hospital Medical Center

Abstract:

Recent studies have shown that using approximations of lean body weight, like adjusted body weight (AdjBW), to dose sedatives in these patients is an effective alternative to actual body weight (ABW), with similar achievement of goal sedation and incidence of adverse effects. The purpose of this study is to evaluate weight-based dosing strategies for ordering propofol and dexmedetomidine.

This is a pre- and post-implementation, single-center retrospective chart review of electronic medical records (EMRs) evaluating changes in dosing strategies for propofol and dexmedetomidine. Patients aged 18 years or older admitted to the medical or surgical intensive care units at an urban safety-net hospital from September 1, 2023, to April 5, 2026, will be included. From October 1, 2025, to February 4, 2026, the dosing weight was manually changed to AdjBW for patients with a Body Mass Index (BMI) > 30 kg/m2. After February 4, 2026, the default body weight in the EMR was changed to AdjBW, impacting all patients whose ABW > 120% of their ideal body weight. Pregnant patients, patients without concomitant fentanyl infusion, and those receiving either propofol or dexmedetomidine in a procedural unit will be excluded. The primary outcome is to evaluate the percentage of time within the target sedation Richmond Agitation Sedation Scale (RASS) goal of -2 to 0 during the first 48 hours of sedation. The secondary outcomes will include time to target sedation (in hours), sedative dose at target sedation, total cumulative dose of the sedative within the first 48 hours of continuous infusion, incidence of adverse drug events, and need for additional sedatives to achieve target sedation. Data to be collected include demographics, type of sedatives used and their doses, sedation scores, pertinent laboratory results, ICU and hospital length of stay. Results will be analyzed using descriptive statistics.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Fixed vs. Weight-based Prothrombin Complex Concentrate for the Reversal of Direct Oral Anticoagulants in Patients with Intracranial Hemorrhage

Author: Natalia Fijas

Primary Preceptor: Emilia Szczesniak-Lagowski

Institution: Alexian Brothers Medical Center

Abstract:

Purpose: Direct oral anticoagulants (DOACs) are widely prescribed due to favorable pharmacokinetics and reduced monitoring compared to warfarin; however, they still carry a risk of bleeding. Four-factor prothrombin complex concentrate (4F-PCC) is an FDA-approved reversal agent for warfarin that can be used off-label for DOAC reversal. Currently, 4F-PCC dosing follows a weight-based strategy. However, there has been an increase in evidence supporting a fixed-dose strategy for DOAC reversal. The purpose of this study is to assess the efficacy and safety of fixed versus weight-based dosing of 4F-PCC for the reversal of DOACs in patients with intracranial hemorrhage (ICH).

Methods: This retrospective, multicenter cohort study was conducted at Ascension hospitals in Illinois, Kansas, Tennessee, Texas, and Wisconsin. Electronic medical records were used to collect data on adult patients who experienced an ICH while on a DOAC and received 4F-PCC as a reversal agent. Eligible patients were those at least 18 years of age who were hospitalized with traumatic or non-traumatic intracranial hemorrhage, received 4F-PCC, and had taken apixaban, rivaroxaban, or edoxaban prior to admission. Patients who were pregnant, incarcerated, weigh less than 46 kg, received a dose less than 1750 units, had no repeat imaging done within 24 hours, or taking a DOAC other than apixaban, edoxaban, or rivaroxaban will be excluded from the study. The primary outcome is the number of patients achieving effective hemostasis defined as stable or improvement of hemorrhage with no new bleeding identified on the first repeat computed tomography scan or magnetic resonance imaging within 24 hours of baseline imaging. Secondary outcomes include repeat 4F-PCC dosing, hospital and ICU length of stay, time from order to administration, in-hospital mortality, neurosurgical intervention, incidence of thrombosis

or venous thromboembolism within 14 days of 4F-PCC administration, and need for blood transfusions.

Results: Results for this study are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluating High-Cost Therapies in a Health System Setting

Author: Jacob Frederick

Primary Preceptor: Collin Dean

Institution: Northwestern Memorial Hospital

Abstract:

Purpose: New drug approvals are coming to market with higher initial costs due to an increased prevalence of targeted and advanced therapies. Most medications administered to inpatients with Medicare are not reimbursed separately from the payment rate assigned to the diagnosis-related group (DRG) for the hospitalization. As a result, healthcare institutions need to increase formulary vigilance, specifically regarding the appropriateness of high-cost medication utilization in inpatient settings. This project will evaluate a health system's expenditure of high-cost medications and guide its System Pharmacy and Therapeutics Committee in future business.

Methods: This quality improvement project is a retrospective review of medication billing transactions of high-cost medications in a large health system between fiscal year (FY) 2023-2025 (September 1, 2022 and August 31, 2025). Inclusion criteria include medication billing transactions with a wholesale acquisition cost (WAC) of ≥ $10,000 per dose, medications billed in inpatient hospital encounters, and parenteral medications (subcutaneous, intramuscular, or intravenous). Exclusion criteria include medications billed in hospital outpatient department (HOD) encounters, patient-supplied medications, and investigational drugs. The primary endpoint of this project is total drug expenditure (in WAC) of all high-value parenteral medications administered in the system's hospitals. Key secondary endpoints include total drug expenditure by therapeutic class, total drug expenditure by ordering provider service line, and total drug expenditure attributed to non-formulary requests.

Results: Total WAC from FY 2023-2025 of drugs with a WAC of ≥$10,000 per dose was $28,161,818.71. The therapeutic class, service line, and total drug expenditure attributed to non-formulary requests were agents to treat blood disorders ($15,384,143.57), thoracic surgery ($8,005,857.00), and $913,589.02, respectively.

Conclusion: Multimillion dollar drug costs for medications costing ≥$10,000 per dose over three fiscal years prompts closer review of high-cost medication usage during regular pharmacy and therapeutics committee meetings, particularly non-formulary orders.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Dual Biologic Therapy in Patients with Inflammatory Bowel Disease

Author: Giovanni Fretes

Primary Preceptor: Kelly Dvorak

Institution: Northwestern Memorial Hospital

Abstract:

Dual biologic therapy (DBT) is an emerging treatment option for patients with refractory inflammatory bowel disease (IBD), or IBD with concomitant rheumatologic or dermatologic conditions. Although clinical use is increasing, DBT is not routinely approved by insurers, leading to frequent pharmacist-led appeals at health-system specialty pharmacies and potential delays in therapy initiation.

This retrospective, single-center study evaluated patients who were prescribed DBT by gastroenterology, dermatology, or rheumatology providers between January 01, 2023 and September 01, 2025. Eligible patients had medically refractory IBD or IBD with concomitant rheumatologic or dermatologic disease and prior exposure to at least one DBT agent. Patients receiving DBT intravenously were excluded. The primary outcome was time from referral to insurance approval. Secondary outcomes included number of appeals required, use of a manufacturer drug program, therapy non-initiation, treatment duration, and safety events such as incidence of serious infection or malignancy.

A total of 26 patients were screened, 16 met inclusion criteria, and 10 were excluded due to non–internal providers, intravenous administration, or prescribing outside the study timeframe. Among those included, 12 (75%) obtained insurance approval. Median time from referral to approval was 15 days (IQR 10–150). The majority (75%), required an insurance appeal, with 3 (25%) of those patients requiring 3 or more appeal submissions. Two patients utilized manufacturer assistance programs. One patient discontinued therapy due to worsening of condition, and one did not initiate therapy. Nearly all patients continued therapy throughout the study duration. No serious infections or malignancies were reported.

Despite inconsistent approval timelines, the majority of patients obtained DBT and did not experience a safety event during the study timeline. This study demonstrates that access to DBT is achievable but insurer related obstacles remain, emphasizing the important role of health-system specialty pharmacies in medication access and initiation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Isavuconazonium prophylaxis in patients receiving post-allogeneic stem cell transplant cyclophosphamide

Author: Logan Gaskill

Primary Preceptor: Daniel Przybylski

Institution: Northwestern Memorial Hospital

Abstract:

Purpose:

Invasive fungal infections (IFI) comprise rare, but serious, complications after an allogeneic stem cell transplant with reported overall incidence of approximately 4% and mortality as high as 13%. Factors influencing the rates of IFI include the type of stem cell transplant, conditioning regimen, and development of graft-versus-host-disease (GVHD).

GVHD occurs in about half of transplant recipients where donor immune cells attack the recipient's tissue. Cyclophosphamide-based GVHD prophylaxis has been adapted as a standard approach with reduced rates and severity of GVHD and longer GVHD-free, relapse-free survival compared to other prophylactic regimens.

Posaconazole has demonstrated efficacy as IFI prophylaxis among patients receiving cyclophosphamide-based GVHD prophylaxis. Isavuconazonium offers a favorable safety profile without QTc prolongation and fewer drug interactions. In acute myeloid leukemia, no significant difference was seen in the incidence of IFI between posaconazole and isavuconazonium. At an urban academic medical center, isavuconazonium is preferentially used for IFI prophylaxis post-allogeneic stem cell transplant. However, isavuconazonium as antifungal prophylaxis in patients with exclusively cyclophosphamide-based GVHD prophylaxis has not been studied. The purpose of the study is to assess the incidence of invasive fungal infections in patients receiving isavuconazonium prophylaxis post-allogeneic stem cell transplant.

Methods:

This retrospective chart review study will evaluate patients who received cyclophosphamide-based GVHD prophylaxis and isavuconazonium for IFI prophylaxis following an allogeneic stem cell transplant at an urban academic medical center. Patients will be excluded if they received other triazole-based prophylaxis or had an active or recent fungal infection within three months prior to transplant. The primary outcome is the incidence of documented IFIs. Secondary outcomes include overall survival and GVHD-free and relapse-free survival.

Results:

Data collection for the project is currently in progress, and results are pending. Results will be presented at the ILPRC in-person meeting.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Dose Intensity of Adjuvant Abemaciclib for High-Risk Hormone Receptor Positive Breast Cancer

Author: Alexis Goggin

Primary Preceptor: Trevor Christ

Institution: Rush University Medical Center

Abstract:

Purpose: This study aims to establish the most sustainable dose of abemaciclib and identify risk factors for those needing dose reductions or prompted discontinuation

Methods: This study is a single- center, retrospective, cohort study. Patients initiated on abemaciclib in the adjuvant setting were identified via Therigy, a comprehensive specialty therapy management software, with the goal of describing the final tolerated dose across our patient population. Patients with early discontinuation were defined as discontinuation prior to 2 years of therapy, as this is the time period recommended for adjuvant abemaciclib. The following subgroups were analyzed for risk factors for dose reduction and early discontinuation: age, weight, prior chemotherapy regimen, and endocrine therapy agent. The study includes patients with resected, hormone-positive (HR+), human epidermal growth factor receptor 2-negative (HER2-), node-positive high-risk early breast cancer greater than or equal to 18 years of age. The study excludes patients less than 18 years of age and those with metastatic breast cancer. The study period begins on 10/13/21 (date of adjuvant abemaciclib approval), ends on the IRB submission date (~4-year period), and the data will be analyzed using descriptive statistics.

Results: In Progress

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Patient-Reported Administration Behaviors for Injectable Biologics in Dermatology: A Multi-Center Survey Study

Author: Alicia Rose Gonzalez

Primary Preceptor: Emily Ellsworth

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Background:

Biologic therapies have revolutionized dermatology by targeting specific immune pathways involved in chronic skin diseases. Common indications for the use of these agents include atopic dermatitis, plaque psoriasis, and hidradenitis suppurativa. Typically, patients self-administer biologics at home by injection according to fixed schedules. However, real-world adherence to these treatments is not well understood, with patients commonly delaying, skipping, or adjusting doses, which can reduce treatment efficacy.

Purpose:

This study aims identify real-world administration patterns and patient-reported outcomes, thereby helping clinicians develop interventions to optimize treatment benefits for dermatology patients receiving injectable biologics.

Methods:

This multi-center survey study will enroll approximately 1,000 adults (18–89 years) across five sites, including up to 200 veterans. Eligible participants are those who have used an injectable biologic for a dermatologic condition within the past 12 months; those using biologics solely for non-dermatologic conditions or who are unable to complete the survey in English will be excluded. An anonymous REDCap survey will collect data on demographics, biologic treatment history, injection timing, missed or delayed doses,

reasons for nonadherence, and perceived impact on disease control. The primary objective is to describe real-world patterns of administration behavior for injectable biologics in dermatology. Secondary objectives assess patient-reported consequences of delayed or missed doses, including symptom flares or reduced effectiveness. Recruitment will occur through chart review and outreach via mail, email, text, phone, or in-person during dermatology clinic visits. Surveys may be completed online via secure link or QR code, on paper in clinic, or by phone.

Results/Conclusions:

Ongoing. To be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Utilization of the Updated Pediatric Asthma Pathway in Emergency Department in a Community Health System

Author: Micaela Gonzalez

Primary Preceptor: Quang Phan

Institution: Endeavor Health NorthShore Hospitals

Abstract:

In October 2024, a community health system updated the institutional pediatric asthma exacerbation guideline, aligning with Global Initiative for Asthma recommendations and current evidence-based practices from other pediatric institutions. Key updates emphasized weight-based dosing of albuterol throughout the treatment course and a single weight-based dose of ipratropium for patients with moderate to severe exacerbations, determined by Clinical Respiratory Score (CRS). This evaluation aims to determine the impact of the revised guideline on prescribing practices in the emergency department (ED).

This evaluation is a quality improvement project, exempt from review by the Institutional Review Board. Retrospective electronic health record data was analyzed for pediatric patients two to seventeen years old who received albuterol in the ED for an asthma exacerbation. Patients with a documented primary diagnosis of a viral or bacterial respiratory infection or anaphylaxis were excluded. To capture peak asthma exacerbation months post-revision, data from October 2024 to March 2025 was analyzed.

The primary objective evaluates appropriate albuterol use following guideline implementation. Secondary objectives evaluated adjunct therapy utilization (e.g., ipratropium, magnesium sulfate, systemic corticosteroids). Appropriate use is defined as utilizing the correct weight-based dose and formulation based on CRS. Medication use is stratified by hourly CRS reassessments over four hours. Descriptive statistics are used to analyze results.

Guideline-based therapy was highest in hour 1 and declined thereafter. Adherence in hour 1 was 39% for albuterol, 66% for ipratropium and magnesium, and 54% for

systemic corticosteroids. By hour 2, adherence fell to 5.6% or less, with little use in hour 3 and none in hour 4. Interpretation is limited by documentation and infrequent use.

High adherence to the guideline was observed during the first hour of care but declined sharply thereafter. Education opportunities exist to improve on consistent CRS reassessment, documentation, and order set utilization may help to ensure evidence-based management.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparison of hypertriglyceridemia-induced acute pancreatitis treatment with continuous insulin infusion before and after order set implementation

Author: Jennifer Goodwin

Primary Preceptor: Danielle Colletta

Institution: Advocate Illinois Masonic Medical Center

Abstract:

Purpose:

Management of hypertriglyceridemia-induced acute pancreatitis varies widely in clinical practice due to the lack of standardized treatment protocols. Prior to order set implementation, treatment was inconsistent, with providers ordering either custom insulin infusions or using the diabetic ketoacidosis (DKA) order set, which risks an increased potential for safety events and confusion on order entry. The new hypertriglyceridemia order set at a large nonprofit medical system allows for consistency in patient treatment and aims to improve multiple aspects of patient care in ways such as decreasing hospital length of stay (LOS), reducing need for insulin rate adjustments, decreasing episodes of hypoglycemia, and shortening time to triglyceride reduction. The purpose of this project is to identify potential areas for improvement within the hypertriglyceridemia order set to optimize patient outcomes.

Methods: This project will retrospectively review adult patients at two Illinois sites from October 2023 to March 2025 who received treatment for hypertriglyceridemia-induced pancreatitis with a continuous insulin infusion either prior to order set implementation or post-implementation. The primary outcome is percent triglyceride reduction at 48 hours of insulin therapy. The secondary outcomes include initial and median insulin infusion rates, number of insulin infusion rate adjustments, type and rate of dextrose fluids ordered, and time to achieve triglyceride levels <1000 mg/dL and <500 mg/dL in hours. The primary safety endpoint is the incidence of hypoglycemia, defined as a blood glucose level less than 70 mg/dL. The comparison of outcomes in these two groups will provide insight into areas of optimization for the newly developed order set.

Results: Pending

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of GLP-1 therapy on warfarin requirements in patients with a Left Ventricular Assist Device

Author: Prit Gor

Primary Preceptor: Lina Piech

Institution: Advocate Christ Medical Center and Advocate Children's Hospital

Abstract:

In the United States, around 6.7 million adults 20 years or older have heart failure. Patients with advanced heart failure awaiting transplant are given the option of left ventricular assist devices (LVAD) as a bridgetotransplant. To prevent pump thrombosis in LVAD, warfarin is recommended by the manufacturers and literature with an International Normalized Ratio (INR) goal of 2-3. Recently, Glucagon-Like Peptide-1 Agonists (GLP-1) are being prescribed to achieve weight loss in patients who are obese to help meet the Body Mass Index goal prior to transplant. There are few studies examining the time in a therapeutic INR range for patients initiated on GLP-1 that are chronically taking warfarin. None of these studies have reviewed the weekly requirements for warfarin after being initiated on GLP-1. Additionally, none have included patients with LVADs who are at an increased risk of bleeding. The objective of this study is to evaluate the impact GLP-1 initiation has on warfarin dosing requirements in patients with an LVAD. The study is a retrospective chart review of patients at a tertiary care anticoagulation clinic that were started on GLP-1 while having a LVAD and were chronically on warfarin. The primary outcome of the study is the percent change in weekly dose of warfarin. The goal of the study is to provide weekly dosage

requirement recommendations for patients on warfarin and GLP-1 with LVADs. Data collected included weekly warfarin doses (month 0, 1, 2, and 3), INR levels (month 0, 1, 2, and 3), hospitalization rates from bleeding, type of LVAD, liver function (> Child Pugh Class B), type of GLP-1, co-morbidities (diabetes, chronic kidney disease, obesity class 1, obesity class 2, obesity class 3), aspirin use and significant drug interactions (amiodarone, sulfamethoxazole/trimethoprim, fluconazole, Itraconazole, voriconazole, carbamazepine, ciprofloxacin). Results and conclusions are pending data analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Optimization of Discharge Antibiotics for Patients with Urinary Tract Infections

Author: Quadri Gray

Primary Preceptor: Megan Newton

Institution: Endeavor Health Swedish Hospital

Abstract:

Purpose: Appropriate selection and duration of discharge antibiotics are critical for ensuring patient safety and evidence-based care, particularly for patients treated for urinary tract infections (UTIs). The 2025 Infectious Disease Society of America guidelines emphasize shorter durations of therapy and antibiotic selection based on UTI classification and local resistance patterns. This project aimed to evaluate the impact of a pharmacist-led intervention on the appropriateness of discharge antibiotic prescribing and total antimicrobial exposure in hospitalized patients treated for UTI.

Methods: This single-center, pre-post study design conducted at a community teaching hospital included a retrospective pre-intervention phase (November 1, 2024 - February 28, 2025), and a prospective intervention phase (November 1, 2025 - February 28, 2026). During the intervention phase, pharmacists reviewed and provided antibiotic recommendations on discharge medication reconciliations in the electronic health record. Additionally, an in-service was provided to internal medicine residents on updated UTI treatment guidelines in October 2025. Eligible patients included adult inpatients discharged on antibiotics for UTI (ICD-10-CM: N30.90). Exclusion criteria included pregnancy or breastfeeding, additional indications for antibiotics, discharge from the emergency department or to hospice. The primary outcomes were proportion of patients discharged on IDSA guideline-concordant antibiotic regimens and total duration of antimicrobial therapy (inpatient plus outpatient days). The secondary outcomes were clinical failure rates within 30 days, 30-day readmission rates, and antibiotic-related adverse drug reactions requiring emergency department visit or hospitalization.

Results: Among 131 patients included in the retrospective phase, 96 patients (73%) had appropriately prescribed antibiotics for UTI at discharge. Of the 35 patients (27%) who were inappropriately prescribed antibiotics, the most common reasons were prolonged durations at discharge or incorrect dosing based on renal function.

Conclusion: Prospective results are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Piloting a process for identification of high-risk fall geriatric patients for pharmacy review within the Emergency Department

Author: Kayla Groen

Primary Preceptor: Ayumi Tran

Institution: Advocate Good Samaritan Hospital

Abstract:

Purpose: The objective of this project is to evaluate the feasibility and potential effectiveness of implementing a process that identifies geriatric fall patients discharged from the Emergency Department (ED) for pharmacist review.

Methods: A retrospective data analysis was performed to include patients 65 and older who presented to the Emergency Department between the dates of August 1, 2024 and July 31, 2025. Other inclusion criteria included chief complaint of fall, discharge disposition to home/living facility, primary care provider designated in the Electronic Medical Record (EMR), and Identification of Seniors at Risk (ISAR) score >3. A modified version of Beer's Criteria was used to quantify potentially inappropriate medications (PIM) and identify opportunities for pharmacist intervention. Evaluation of project barriers and challenges within the EMR and ED pharmacist workflow was also conducted.

Results: Retrospective chart review was performed for 60 patients who had an ED visit for fall with ISAR >3 and discharge disposition to home/living facility. Thirty-six potentially inappropriate medications were identified between 25 patients. Of the patients who revisited the ED for fall after the initial visit, 76% of PIM were continued. Analysis of results and potential application to be presented at the Illinois Pharmacy Resident Conference.

Conclusion: Opportunity exists to add a process that addresses potentially inappropriate medications in the geriatric population. Several barriers exist that would need to be

addressed prior to implementation of the project. Additional analysis of the project's viability and operational feasibility to be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Curriculum Development for Hospital and Health System Pharmacy Rotation

Author: Isabella Guizzetti

Primary Preceptor: Mark Wadley

Institution: Advocate Illinois Masonic Medical Center

Abstract:

Purpose

At an urban community teaching hospital, there is a site-based description that provides an overview of the hospital and the health system experiential rotation; however, there is not a detailed curriculum to provide structure for the rotation. Because learners frequently work in the central pharmacy with many different pharmacists, they may end up repeating tasks rather than being challenged with new learning opportunities. Having a resource to guide a student's daily activities and ensure required topics are adequately covered would benefit the learner and preceptor. The objective of this quality improvement project is to develop standard curriculum for the hospital and health system experiential rotation that will allow students to function as extenders of the pharmacist while encouraging independent learning opportunities.

Syllabi from partnering pharmacy schools will be reviewed to determine the rotation requirements for learners on a hospital and health system experiential rotation. A survey will be created and distributed to pharmacists who have worked with students on this rotation in the past to identify challenges and obtain suggestions. The information collected will be used to guide the development of student schedules, independent activities, and pharmacist extender responsibilities. Data on the expected impact of the curriculum was collected through pre- and post- surveys sent to all pharmacists to evaluate their comfort level precepting students on their hospital and health system rotation before and after this tool being available as a resource.

Results: pending

Conclusion: pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Initial Crushed Posaconazole Dosing

Author: Jessica Haase

Primary Preceptor: Jenny Novak

Institution: Loyola University Medical Center

Abstract:

Purpose:

Posaconazole is used for prophylaxis or treatment of invasive fungal infections in critically ill and immunocompromised patients, such as patients with hematologic malignancy or solid organ transplant recipients. This population is at risk for developing oropharyngeal dysphagia due to nausea, mucositis, or neutropenic enterocolitis, which poses a limitation on utilization of oral medications. In addition, critically ill patients can have altered absorption with barriers, such as mechanical ventilation, to taking medications orally. Stopping antifungal prophylaxis due to lack of enteral access poses risk of breakthrough fungal infections. Posaconazole comes in an intravenous formulation with associated cost barriers and an oral suspension with unreliable absorption. Current practices at an academic medical center include crushing posaconazole delayed release tablets for administration via enteral feeding tube, however current literature has not yet established an agreed upon initial crushed dose. The objective of this research is to determine an appropriate starting dose and frequency for crushed posaconazole administered via enteral feeding tube that results in therapeutic drug levels.

Methods:

This is a retrospective, single-center, chart review study analyzing crushed posaconazole levels. Patients at least 18 years of age receiving crushed posaconazole with trough level monitoring are included for the time period between September 1st, 2020 and September 1st, 2025. Exclusions to this study are burn patients, patients receiving less than 5 days of

crushed posaconazole prior to level, and patients without a posaconazole level. The primary end point is the percentage of patients with an initial posaconazole level less than 0.7. Secondary endpoints include the percentage of patients with therapeutic trough levels based on indication and the average posaconazole level between groups.

Results:

The results of this study are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: The Rhythm of Sedation: Comparison of Methohexital, Propofol, and Etomidate for ED Cardioversions

Author: Maria Hajiharis

Primary Preceptor: Andrew McInerney

Institution: Advocate Lutheran General Hospital

Abstract:

The preparation for cardioversions in the emergency department (ED) includes a selection of medication for procedural sedation. The use of a general anesthetic with a quick onset and recovery time with minimal side effects is favorable. There are several options available with variable pharmacokinetics and hemodynamic effects. This retrospective chart review looks at patients 18 years of age and older that have undergone electrical cardioversion with either methohexital, etomidate, or propofol. Current data comparing the three agents is limited, with one retrospective review by Bauer and colleagues comparing methohexital to propofol and etomidate for procedural sedation in ED electrical cardioversions finding no statistically significant difference in the time from first dose of the agent to clinical recovery. The primary outcome is the time from sedative administration to cardioversion. Additional collection points included time of sedative administration to procedure end time, respiratory depression (O2 <90%), hypotension (<90 mmHg), myoclonus, nausea/vomiting, and decompensation requiring intubation. The results and conclusions are in progress.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Prophylaxis and Progress: Evaluating Aprepitant in Total Joint Arthroplasty

Author: Brandon Hansknecht

Primary Preceptor: Grant Elliott

Institution: Endeavor Health NorthShore Hospitals Endeavor Health

Abstract:

Purpose

This project aimed to evaluate if aprepitant, in addition to standard postoperative nausea and vomiting (PONV) prophylaxis, can reduce the percentage of admissions in patients undergoing a total hip or knee arthroplasty within this orthopedic hospital, as compared to standard PONV prophylaxis regimens alone.

Methods

A retrospective review of the electronic health record was conducted on patients that underwent an outpatient total hip or knee arthroplasty (OTJA) between January 1, 2025 to August 31, 2025. Patients that were administered a one-time dose of intravenous aprepitant 32mg plus standard PONV prophylaxis medications (dexamethasone, ondansetron, and scopolamine) were compared to patients that only received standard PONV prophylaxis. The primary objective aimed to determine if the addition of aprepitant had an effect on the percentage of unanticipated hospital admissions for PONV in patients that underwent an OTJA. Admission criteria for PONV was based on the primary team's clinical judgement. The secondary objectives evaluated the difference in milligrams per person of perioperatively administered ondansetron and dexamethasone in patients that received aprepitant versus patients that did not. Statistical analysis used to evaluate significance was inferential in nature.

Results

This project observed that patients who received preoperative intravenous aprepitant 32mg before a total hip or knee arthroplasty had a statistically significant lower percentage of admissions for PONV compared to patients that received standard treatment alone (1.5% vs 8.1%; $p < 0.0001$). It was also observed that aprepitant could reduce the average milligrams per person of ondansetron (5.1 vs 8.9; $p = 0.0153$), but not the average milligrams per person of dexamethasone ($p = 0.3786$). In conclusion, aprepitant demonstrated a useful role in improving patient outcomes by reducing the admissions for PONV in patients undergoing total hip or knee arthroplasties.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Inpatient Sterile Compounding Complexity Matrix

Author: Cameron Harrison

Primary Preceptor: Colton Staudt

Institution: Northwestern Memorial Hospital

Abstract:

Inpatient sterile compounding supports high acuity, time sensitive medication needs across a 24/7 hospital environment, yet workload variability and inconsistent documentation make it challenging to staff appropriately, meet turnaround time (TAT) expectations, and fully demonstrate compliance with USP <797>. This project aims to develop and implement a standardized compounding complexity matrix that stratifies compounded sterile preparations (CSPs) by USP <797> risk level (I–III) and preparation/personnel requirements. The framework is designed to enhance workload transparency, strengthen operational benchmarking, and support reliable, high quality sterile compounding services.

Methods:

This single system quality improvement study will evaluate CSPs prepared within the inpatient cleanroom suites at a large academic medical center. All CSPs prepared in a Clean Room Suite and documented in the institution's electronic health record (Dispense Prep and related modules) from October 1, 2024, to September 30, 2025, will be retrospectively extracted. Inclusion criteria: sterile CSPs subject to USP <797> with complete preparation and personnel documentation. Exclusions include non compounded medications, non sterile products, batched items, incomplete documentation, and medications prepared outside designated cleanroom environments.

Each CSP will be assigned a complexity tier, with time motion sampling used to validate preparation times and reflect the precision and consistency of inpatient compounding workflows. Primary endpoints include median preparation time by USP <797> tier, personnel minutes per finished dose, proportion of routine and STAT doses meeting TAT goals, and documentation completeness. Secondary endpoints include barcode scan

compliance, rework and wastage rates, STAT delay rates, and workload distribution by role, shift, and location. Data will inform FTE modeling calibrated to the specialized requirements of inpatient sterile compounding.

Results will be presented at the Illinois Pharmacy Residency Conference in May 2026.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Assessing Outcomes of a Pharmacist Led Post-Transplant Hyperglycemia Clinic Within an Academic Hospital

Author: Ghenwa Hassan

Primary Preceptor: Vishal Prakash

Institution: Northwestern Memorial Hospital

Abstract:

Uncontrolled post-transplant hyperglycemia (PTHG) is a common complication affecting 10-40% of solid organ transplant (SOT) recipients and is associated with increased risk of post-transplant diabetes mellitus (PTDM), graft failure and mortality. Therefore, early identification and management, including patient education, complication screening, cardiovascular risk reduction, and antihyperglycemic therapy are essential. The preferred initial treatment for PTHG immediately post-transplant is insulin therapy, though oral agents like DPP-4 inhibitors and sulfonylureas may be considered in select populations. Pharmacists are uniquely positioned to closely monitor SOT recipients for PTHG and engage in hyperglycemia management to improve glycemic outcomes in this challenging population. Yet there is limited available real-world data on the impact of outpatient pharmacist management of PTHG. This project investigates the effectiveness of a pharmacist-led PTHG clinic on glycemic outcomes within an academic medical center.

This retrospective, single center cohort study compares outcomes before and after clinic implementation among adults (≥18 years) who recently received a kidney or liver transplant and demonstrated post-transplant hyperglycemia. This is defined as at least one blood glucose ≥150 mg/dL in the 24 hours before discharge or frequent dysglycemia during admission. Patients with type 1 diabetes or insulin pump use are excluded.

The primary endpoint is the change in average blood glucose (mg/dL) from hospital discharge to the first endocrinology or primary care (PCP) visit. Secondary endpoints will assess hospitalizations and emergency department (ED) visits related to dysglycemia, time to first endocrinologist or PCP visit and the number and type of pharmacist interventions made. Data collected will be protected and stored in a secure file. Results and conclusions will be reported at the Illinois Pharmacy Residency Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Financial Impact of IV Smart Pump Interoperability on Infusion Length Documentation Across a Regional Hospital System

Author: James Havens

Primary Preceptor: Joshua Schmees

Institution: St. Elizabeth's Hospital - Hospital Sisters Health System

Abstract:

Since the turn of the century, smart IV pumps and dose-error reduction systems (DERS) have expanded in their functionality and use in hospitals and health systems. The drug libraries, soft/hard dosing limits, and visible alerts to nursing staff provide safety guardrails that protect against critical dosing errors and potential patient harm. Smart pump to EHR interoperability allows for enhanced maintenance of drug libraries, reduction in manual programming by nursing staff, and improved capture of infusion start and stop times. These infusion start and stop times are valuable for determining how long an infusion ran. Depending on how long an infusion is run, different billing codes can be applied, with resulting differences in billing amounts and reimbursement. Missing or incomplete infusion start and stop time data may result in poor documentation of infusion volumes. This can paint an inaccurate picture of clinical metrics, like fluid balance status, or impair financial metrics, with reduced or negated reimbursement. Given that health systems have shown increased CPT-coded claims output and billing revenue after IV smart pump adoption and interoperability with EHRs, such an implementation can lead to clinical and financial benefits.

Data collected both pre- and post-smart pump implementation included infusion location, charge codes, revenue codes, CPT codes, and posted revenue amounts, as well as the number of infusions corresponding to each metric. These metrics can provide justification for the financial outlay and man-hours spent in preparation, hardware acquisition, installation, training, go-live, and continued support. As such, this analysis of the health system’s implementation of IV Smart Pumps EHR interoperability will assess the rate of

capture of IV stop times and the subsequent financial impact, with a comparison to pre-smart pump implementation figures.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Implementation of a pharmacist-led deprescribing initiative utilizing VIONE deprescribing practices within the new Federal Electronic Health Record.

Author: Liam Herrebout

Primary Preceptor: Joshua Miller

Institution: VA - North Chicago, IL - Captain James A. Lovell Federal Health Care Center

Abstract:

Purpose: Polypharmacy in geriatric patients increases the risk of adverse drug events, hospitalization, and other health outcomes. Establishing a deprescribing standard of practice helps to mitigate the risks associated with polypharmacy. This study uses a federal government founded deprescribing tool for categorizing medications into Vital, Important, Optional, Not Indicated/Treatment Complete, and Every Medication Has an Indication. The objective for this project is to implement a sustainable, pharmacist-led deprescribing initiative in the ambulatory and long-term care setting within a new federal electronic health record.

Methods: This is a retrospective cohort quality assurance project analyzing the deprescribing dashboard and associated notes following an evaluation by primary care pharmacists. Data will be collected from the federal electronic health record between May 1, 2025 – November 1, 2025. Eligible patients are veterans at least 65 years of age with 10 or more active medications who have a completed a deprescribing review by a Clinical Pharmacist Practitioner. This study will use descriptive statistics to characterize medication interventions based on the drug class, scheduled or as needed usage, and reason for discontinuation.

Results: This study found that over the selected six-month period, 123 deprescribing notes were entered across the facility with a total of 116 prescriptions discontinued across 87 unique medications. The most common reasons listed on discontinuation were “No Longer Taking” (62.1%), “Duplication in Therapy” (15.5%), and “Not Indicated / Treatment Complete” (13.8). For the high-risk medication categories, 22 medications were discontinued.

Conclusions: This study identified the impact of pharmacist-led deprescribing practices within the VA setting. Limitations of this study include missing data for medications without a note or discontinued by a non-pharmacist provider. While the majority of discontinuations were medications patients had already stopped taking, this change adds a layer of patient safety. This federal government medical center plans to continue this deprescribing project for indefinite sustainment.

Methods: This is a retrospective cohort quality assurance project analyzing the VIONE dashboard and associated VIONE notes following an evaluation by primary care pharmacists. Data will be collected from the Federal Electronic Health Record (Cerner) between May 1, 2025 – November 1, 2025. Eligible patients are veterans at least 65 years of age with 10 or more active medications who have a completed VIONE review by a Clinical Pharmacist Practitioner. This study will use descriptive statistics to characterize medication interventions based on the drug class, scheduled or as needed usage, and reason for discontinuation.

Results: This study found that over the selected six-month period, 123 VIONE notes were entered across the facility with a total of 116 prescriptions discontinued across 87 unique medications. The most common reasons listed on discontinuation were “No Longer Taking” (62.1%), “Duplication in Therapy” (15.5%), and “Not Indicated / Treatment Complete” (13.8). For the high-risk medication categories, 22 medications were discontinued.

Conclusions: This study identified the impact of pharmacist-led deprescribing practices within the VA setting. Limitations of this study include missing data for medications without a note or discontinued by a non-pharmacist provider. While the majority of discontinuations were patients had already stopped taking, this change adds a layer of patient safety. The James Lovell VA plans to continue the VIONE project for indefinite sustainment.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Sodium Bicarbonate Administration During In-hospital Cardiac Arrest on Survival to Hospital Discharge

Author: Alana Joyce Heyrana

Primary Preceptor: Abby Shumaker

Institution: Blessing Hospital

Abstract:

Purpose: The purpose of this study is to evaluate the effect of sodium bicarbonate (SB) administration on survival to hospital discharge after achievement of return of spontaneous circulation (ROSC) in patients experiencing an in-hospital cardiac arrest (IHCA). The routine use of SB is not recommended in the American Heart Association (AHA) 2020 guidelines for Advanced Cardiovascular Life Support (ACLS) or the 2023 focused update. According to AHA, no new evidence has been published that demonstrates SB administration improves patient outcomes in cardiac arrest. Literature referenced for this recommendation is largely focused on the out-of-hospital cardiac arrest (OHCA) patient population.

Methods: A single-center, retrospective analysis is being conducted to evaluate utilization of SB for patients who experienced IHCA and achieved sustained ROSC from June 2019 to June 2025. Patients 18 years-old or older with full code status who experienced IHCA and achieved sustained ROSC, and have an ABG, CMP, or BMP drawn up to 24-hours before or up to three hours after IHCA are included. Primary outcome is survival to hospital discharge. Key secondary outcomes are time to ROSC, survival to discharge for patients with a code time greater than or equal to 15 minutes, and time to SB administration. Additional secondary outcomes include use for ACLS recommended indications including survival in patients with metabolic acidosis, hyperkalemia, and medication overdose with an indication for treatment with SB; length of stay; missed SB charges, and discharge disposition. Data is collected from the electronic health record via retrospective chart review. Data will be analyzed using descriptive statistics including measures of central tendency and inferential statistics including the Chi square test of independence.

Results and conclusions are pending and will be included during the presentation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Outpatient Pharmacist-Led Continuous Glucose Monitoring Management Programs on Glycemic Outcomes

Author: Anthony Hightower

Primary Preceptor: Marlowe Djuric Kachlic

Institution: University of Illinois at Chicago College of Pharmacy

Abstract:

Background/Objectives:

Continuous glucose monitors (CGMs) have significantly advanced diabetes management since their introduction in 1999 by providing real-time glycemic data. Although CGM services are commonly implemented in ambulatory care clinics, outpatient pharmacists remain an underutilized resource despite their accessibility, medication expertise, and frequent patient interactions. Infrastructure limitations, unclear reimbursement pathways, and a lack of standardized workflows continue to restrict widespread adoption of pharmacist-led CGM services. Existing evidence demonstrates that CGM use improves key glycemic metrics, including hemoglobin A1c (A1c), time in range (TIR), time above range (TAR), time below range (TBR), and glucose management indicator (GMI) though most data is derived from clinic-based models. Evidence supporting outpatient pharmacist-led CGM management remains limited. This study aims to evaluate changes in A1c, TIR, TAR, TBR, and GMI in adults with Type 1 or Type 2 diabetes enrolled in the pharmacist-led CGM Management Program at our institution's outpatient pharmacy. A secondary objective is to assess medication adherence through proportion of days covered (PDC).

Methods:

This retrospective analysis will include adult participants enrolled in the SCB Pharmacy CGM Management Program. Data extracted from the electronic health record and program databases will include CGM start date, glycemic metrics, pharmacist interventions, medication changes, and follow-up encounters. Medication adherence will be evaluated using PDC for diabetes and cardiac therapies. All data will be securely stored, de identified,

and assigned unique study codes, accessible only to the principal investigator and coinvestigators in a HIPAA compliant database.

Results:

Descriptive statistics will summarize baseline and follow-up glycemic and adherence outcomes. Data collection and analysis are ongoing.

Conclusions/Implications:

This study seeks to demonstrate the clinical impact of outpatient pharmacist-led CGM programs on glycemic control and medication adherence. Findings may guide future workflow integration, support expanded pharmacist roles in diabetes care, and highlight outpatient pharmacies as accessible settings for CGM-driven chronic disease management.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Phenobarbital Dosing Practices in Alcohol Withdrawal: A Retrospective Study of Protocol Use, Additional Dosing, and Associated Outcomes

Author: Hannah Hinrichs

Primary Preceptor: Morgan Ridout

Institution: OSF Healthcare Saint Francis Medical Center and OSF Healthcare Children's Hospital of Illinois

Abstract:

Purpose:

While studies have shown that phenobarbital is effective in both ED and ICU settings for managing alcohol withdrawal syndrome (AWS), there is limited research on the optimal dosing strategy and how to adjust treatment when the initial loading dose fails to control symptoms. Our institutional AWS protocol uses a phenobarbital 10 mg/kg ABW loading dose (maximum: 1000 mg dose) followed by a taper. The purpose of this study is to evaluate the efficacy of our institutional protocol based on need for additional off protocol doses of phenobarbital and to identify practice patterns of "re-dosing" phenobarbital after the initial loading dose.

Methods:

This study is a retrospective, multi-center, single health system chart review assessing alcohol withdrawal management in the period from January 1, 2023 to December 31, 2024. The study included patients aged 18 years and older who received an intravenous phenobarbital loading dose of 10 mg/kg (up to a maximum of 1000 mg) for AWS. The primary outcome of this study is to evaluate the percentage of patients receiving an additional off-protocol dose of phenobarbital. The secondary outcomes of this study are to identify dosing patterns of off-protocol phenobarbital doses including dose (mg, mg/kg), time from initial phenobarbital loading dose, adjunct medication use for alcohol withdrawal, percentage of patients requiring intubation, reason for intubation, and ICU

length of stay. Off-protocol dosing of phenobarbital is defined as any additional IV phenobarbital loading dose sooner than protocol allows.

Summary of Results/Conclusion:

Results and conclusion pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluating the Impact of DEA-Licensed Clinical Pharmacist Practitioners on Prescribing Practice of Buprenorphine in Veterans

Author: Corinne Howlett

Primary Preceptor: Marshall Lee

Institution: VA - North Chicago, IL - Captain James A. Lovell Federal Health Care Center

Abstract:

Background: By 2034, the United States is projected to face a physician shortage of approximately 180,000 providers. As medications are foundational to the management of chronic diseases, pharmacists are in a unique position to help bridge this gap and provide access to care. In the Department of Veterans Affairs (VA), pharmacists can manage medications autonomously with prescriptive authority under a practice area–based scope of practice. Pharmacist prescriptive authority may also include controlled substance prescriptive authority (CSPA) when the pharmacist is licensed in a state that allows them to be registered with the Drug Enforcement Administration (DEA). CSPA improves the timeliness of prescribing as well as improving the patient-provider relationship. DEA-registered pharmacists with CSPA are associated with improved practice efficiency, reduced burden on other providers, and positive impact on patients. The goal of this study is to evaluate the impact of DEA-registered pharmacists on buprenorphine initiations, naloxone prescriptions for patients that are prescribed buprenorphine, Prescription Drug Monitoring Program (PDMP) queries by buprenorphine prescribers, and urine drug screen orders for patients on buprenorphine.

Methods: This is a quality assurance/quality improvement (QA/QI) project analyzing buprenorphine initiated by DEA-registered clinical pharmacist practitioners within a 12-month period. Eligible patients include Veterans at a VA hospital that initiate buprenorphine treatment prescribed by a DEA-registered prescriber during the data collection period. Patients will be excluded if they receive buprenorphine treatment from a provider outside the facility. The electronic health record will be utilized to collect baseline characteristics, buprenorphine prescription and dispensing data, naloxone prescription

data, PDMP queries, and urine drug screen orders. The data will be analyzed using descriptive statistics to identify key patterns and trends.

Results: Research still in progress

Conclusion: Research still in progress

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Ceftazidime versus cefepime in low-risk fever and neutropenia pediatric patients

Author: Taylor Hudik

Primary Preceptor: Melody Hernandez

Institution: Rush University Medical Center

Abstract:

Purpose:

Pediatric fever and neutropenia (FN) guidelines from the American Society of Clinical Oncology (ASCO) recommend broad-spectrum monotherapy with an antipseudomonal beta-lactam for high-risk patients but provide no clear guidance for low-risk patients. Although institutional guidelines recommend ceftazidime for low-risk FN, provider practice varies. This study aimed to describe empiric antibiotic prescribing patterns at our institution and compare outcomes between ceftazidime and cefepime in pediatric oncology patients with low-risk FN.

Methods:

This single-center, retrospective cohort study included pediatric oncology patients with low-risk FN who received empiric ceftazidime or cefepime. Demographics and clinical data related to cancer diagnosis and FN episodes were collected. The primary outcome was the incidence of successful defervescence without treatment modification, defined as becoming afebrile within the first 48 hours of empiric therapy and remaining afebrile for at least 24 hours. Secondary outcomes included time to defervescence, antibiotic duration, length of stay, count recovery at discharge, 30-day infection-related mortality, time to culture clearance, antimicrobial susceptibility, and emergence of resistance in positive cultures. All data were reported using descriptive statistics.

Results:

Twenty-six low-risk FN episodes were included: 24 treated with cefepime and 2 with ceftazidime. Successful defervescence without treatment modification occurred in 75% of cefepime patients and 50% of ceftazidime patients. Patients receiving ceftazidime also had shorter hospital stays (2 vs. 7.19 days) and shorter antibiotic durations (3 vs. 6 days).

Conclusion:

Successful defervescence without treatment modification was achieved in ~70% of all patients in this study. Despite institutional guideline recommendations, 92% of low-risk patients were initiated on cefepime, suggesting strong provider influence on antibiotic selection in addition to a possible need for additional gram-positive coverage. Patients treated with ceftazidime demonstrated trends toward shorter hospital stays and reduced antibiotic duration; however, interpretation of these findings is limited by the small number of patients who received ceftazidime.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Retrospective Chart Review of Glucagon-like Peptide-1 (GLP-1) Receptor Agonists Induced Suicidality in a Federal Healthcare Facility

Author: Briana Hunt

Primary Preceptor: Jennifer Tran

Institution: VA - North Chicago, IL - Captain James A. Lovell Federal Health Care Center

Abstract:

Purpose

Glucagon-like peptide-1 receptor agonists (GLP-1) and Glucose-dependent insulinotropic polypeptide (GIP)/Glucagon-like peptide-1 receptor agonists are increasingly prescribed for type 2 diabetes and obesity, but concerns remain about their potential link to suicidality, particularly in patients with psychiatric histories. Given the higher prevalence of mental health disorders among Veterans, this study aims to evaluate the incidence of suicidal thoughts following initiation of GLP-1 or GIP/GLP-1 therapy at a federal healthcare center.

Methods

This retrospective cohort quality assurance/quality improvement project will analyze Veterans who initiated GLP-1 or GIP/GLP-1 receptor agonist therapy at Captain James A. Lovell Federal Health Care Center (FHCC). Data will be extracted from electronic medical records for patients initiated on these medications between March 9, 2024, through December 31, 2024, with a target sample size of 250 patient charts. Eligible participants include veterans aged 18 years and older, patients newly prescribed GLP-1 receptor agonists, patients prescribed and adherent to study therapies for ≥ 1 year. The primary outcome of this study is incidence of suicidal thoughts or behaviors within one year of initiating GLP-1 receptor agonist or GIP/GLP-1 receptor agonist therapy among Veterans at FHCC. This will be evaluated by positive screening on the Columbia-Suicide Severity Rating Scale (C-SSRS), use of the Veteran Crisis Line, psychiatric hospitalization due to suicidal ideation, or emergency room visit due to suicidal ideation. Secondary outcomes of this study include changes in depression or anxiety scores (e.g., PHQ-9, GAD-7) after starting GLP-1 or GIP/GLP-1 receptor agonist therapy, rates of psychiatric hospitalizations or

emergency department visits for any mental health reasons within one year, discontinuation rates of GLP-1 or GIP/GLP-1 receptor agonists due to neuropsychiatric side effects, mental health referrals, and changes in psychotropic medications. Descriptive statistics will be used to analyze the data.

Results: Not yet available, research-in-progress.

Conclusion: Not yet available, research-in-progress.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Initiation of SGLT2 Inhibitors in Acute Decompensated Heart Failure Patients with Low eGFR

Author: Austin Ignatovich

Primary Preceptor: Bianca Burnett

Institution: Northwestern Memorial Hospital

Abstract:

Sodium-glucose cotransporter-2 inhibitors (SGLT2i) are one of the four pillars of guideline-directed medical therapy (GDMT) in heart failure with reduced ejection fraction (HFrEF), demonstrating rapid clinical benefit when initiated early. However, their safety in patients with advanced chronic kidney disease (CKD; eGFR <20 mL/min) remains poorly defined, creating an ongoing treatment gap for a population at high risk of morbidity and mortality. This study aims to evaluate the incidence of adverse events following initiation of SGLT2i in patients with HFrEF and poor renal function. This retrospective matched cohort study will include approximately 150 patients with HFrEF and eGFR <20 mL/min initiated on SGLT2i therapy. Patients will be evaluated using a matched cohort design based on age, ethnicity, and ejection fraction, among other factors. The primary composite outcome is the incidence of severe hypoglycemia, dehydration, hypotension, renal function worsening, or euglycemic diabetic ketoacidosis — adverse events previously associated with SGLT2i therapy. Data will be analyzed to compare incidence rates across matched groups and to identify patient characteristics associated with increased risk and overall outcomes. By characterizing adverse outcomes associated with SGLT2i use in patients with reduced kidney function, this study may direct safer prescribing practices, guide patient selection, and expand the therapeutic reach of GDMT in heart failure. Results will be presented at the Illinois Pharmacy Resident Conference in May 2026.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Role of cefdinir compared to other oral cephalosporins in treating uncomplicated infections in hospitalized patients

Author: Maria Ileni

Primary Preceptor: Sun Min Lim

Institution: Advocate Good Shepherd Hospital

Abstract:

Purpose:

The transition from intravenous (IV) to oral (PO) antibiotic therapy is a cornerstone of antimicrobial stewardship and facilitates timely hospital discharge. Uncomplicated pneumonia and urinary tract infections are common indications for IV-to-PO step-down therapy. Cefdinir, an oral third-generation cephalosporin, is frequently selected for step-down therapy due to frequency of dosing and availability, despite pharmacokinetic limitations including low oral bioavailability and variable tissue and urinary penetration. Head-to-head comparative data evaluating cefdinir versus other oral cephalosporins across uncomplicated infections remain sparse, highlighting the need for real-world outcome evaluation. The objective of this retrospective chart review is to describe the clinical outcomes of patients discharged on cefdinir after step-down from IV antibiotic therapy.

Methods:

This multi-site retrospective cohort study included adult and pediatric patients (≥2 months of

age) hospitalized across a large multihospital health system between January 1 2024 and February 29 2024. Eligible patients received cefdinir or an alternative PO cephalosporin (cephalexin, cefuroxime, cefadroxil, or cefpodoxime) as step-down therapy for uncomplicated urinary tract infections or pneumonia following at least one dose of IV ceftriaxone. The primary outcome was a composite measure of treatment failure, defined as recurrence of infection with the same organism within 90 days of discharge, modification of the initial antibiotic regimen within 14 days of initiation, or hospital readmission attributable to the same infection within 90 days. Secondary outcomes included the individual components of the composite primary outcome, incidence of Clostridioides difficile infection within 90 days of completion of therapy, and other adverse drug events.

Results:

A total of 2748 patients were evaluated, from which 213 met inclusion criteria, stratified as 87 patients in the cefdinir group and 126 patients receiving alternative PO cephalosporins. The mean age was 77.2 ± 19.2 years. Baseline characteristics were generally comparable between groups, though respiratory infections were more common in the cefdinir group ($p<0.01$) while urinary tract infections were more frequent among patients receiving other cephalosporins ($p<0.001$). The primary composite outcome of treatment failure occurred in 22 patients (25.2%) in the cefdinir group and 34 patients (26.9%) in the comparator group ($p = 0.782$). The individual

components of the composite outcome were similar between groups. The mean duration of IV

therapy was 3.29 ± 1.30 days in the cefdinir group and 2.91 ± 1.48 days in the comparator group

(p = 0.059), while mean PO therapy duration was 4.79 ± 3.13 days and 5.04 ± 2.70 days,

respectively (p = 0.54). Total antibiotic duration and hospital length of stay were comparable

between groups.

Conclusions:

Cefdinir demonstrated similar rates of treatment failure compared with other PO cephalosporins

when used as step-down therapy following IV ceftriaxone for uncomplicated pneumonia and

urinary tract infections. Despite known pharmacokinetic limitations, cefdinir was not associated

with increased recurrence, antibiotic modification, or infection-related readmission. All patients

received initial IV therapy prior to PO step-down. Considering that relatively short durations of

therapy ranging from 3-5 days have been shown to be effective in community-acquired

pneumonia and uncomplicated urinary tract infections, a majority of the cohort may have had

adequate treatment during the initial period of IV therapy. Therefore, these findings may not be

generalizable to scenarios in which cefdinir is used as primary therapy without an IV lead-in.

Further studies are needed to evaluate outcomes in different treatment strategies and patient

populations.

Methods: This retrospective chart review included adult and pediatric patients (≥2 months of age) hospitalized across Advocate Health Illinois and Wisconsin divisions between January 2024 and June 2024. Eligible patients received cefdinir or an alternative oral cephalosporin (cephalexin, cefuroxime, cefadroxil, or cefpodoxime) as step-down therapy for uncomplicated urinary tract infections or pneumonia following at least one dose of intravenous ceftriaxone. The primary outcome was a composite measure of treatment failure, defined as recurrence of infection with the same organism within 90 days of discharge, modification of the initial antibiotic regimen within 14 days of initiation, or hospital readmission attributable to the same infection within 90 days. Secondary outcomes included the individual components of the composite primary outcome, incidence of Clostridioides difficile infection within 90 days of completion of therapy, and other adverse drug events.

Results: Data collection, analysis, and conclusions in progress

Conclusion: Data collection, analysi,s and conclusions in progress

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Safety Outcomes of Empiric Linezolid versus Vancomycin in Patients with Pneumonia and Risk Factors for Methicillin-Resistant Staphylococcus aureus Infection

Author: Faiz Inamdar

Primary Preceptor: Lisa Opland Reidel

Institution: Alexian Brothers Medical Center

Abstract:

Purpose: Community acquired pneumonia (CAP) is a major cause of hospitalization and mortality among infectious diseases. Present literature suggests that linezolid is associated with better clinical outcomes than vancomycin in hospital-acquired and ventilator-associated pneumonia, but data comparing these agents in CAP remain limited. This study aims to compare the safety and efficacy of linezolid versus vancomycin for treating all pneumonia types in patients with MRSA risk factors.

Methods: This retrospective, multicenter cohort study will collect data from nine Ascension Health hospitals from January 2020 through September 2025. Patients will be eligible for enrollment if they were ≥18 years old, received vancomycin or linezolid, and had a diagnosis of pneumonia. Patients will be excluded if they were pregnant, incarcerated, receiving hospice or comfort care, had a secondary infection site requiring MRSA coverage, or received doses of both vancomycin and linezolid during hospital admission. The primary outcome will assess the composite safety, defined as acute kidney injury, serotonin syndrome, cytopenia, QTc prolongation, infusion related reaction, and Clostridioides difficile infection, of linezolid versus vancomycin for the treatment of pneumonia in patients with MRSA risk factors. Secondary outcomes will include hospital length of stay (LOS), intensive care unit (ICU) LOS, incidence of transfer to ICU level of care, all-cause in-hospital mortality, time to transition to oral antibiotics, antibiotic days of therapy, and all-cause 30-day readmission. The electronic medical record will be used to collect baseline characteristics, length of stay, antibiotic days of therapy, 30-day readmission, safety outcomes, and mortality. Outcomes will be analyzed using descriptive and inferential statistics, with statistical significance set at $p < 0.05$.

Results and Conclusion: *Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Seizure risk after endovascular coiling of cerebral aneurysms following early discontinuation of seizure prophylaxis with levetiracetam

Author: Damaris Jacota

Primary Preceptor: Nicholas Panos

Institution: Rush University Medical Center

Abstract:

Incidence of aneurysmal subarachnoid hemorrhage (aSAH)-associated seizures has been reported in approximately 6-26% of patients with variations depending on the type of endovascular procedure, timing of seizures post-aneurysm rupture or unsecured aneurysms, and prophylactic administration of anti-seizure medications (ASM) during hospital admission. Due to the lack of randomized controlled trials, the indication and duration of ASM use post-aSAH remains controversial amongst neurointensivists and neurosurgeons. Neurocritical Care Society (NCS) Consensus suggests that if anticonvulsant prophylaxis is used, a short course (3–7 days) is recommended with agents that do not include phenytoin. Upon aSAH presentation and arrival at Rush University Medical Center (RUMC), all patients receive levetiracetam for seizure prophylaxis (prior to surgical interventions), followed by either endovascular clipping or coiling. On average, aSAH patients at RUMC will typically receive approximately 48 hours total of fixed-dose levetiracetam 500 mg twice daily as seizure prophylaxis. The purpose of this study is to evaluate the incidence of seizures following immediate discontinuation of levetiracetam prophylaxis after cerebral aneurysm securement via endovascular coiling at RUMC and determine if aggressive seizure prophylaxis strategies are warranted.

This retrospective cohort study includes patients admitted to RUMC from January 1st, 2015, to January 1st, 2025, with an admitting diagnosis related to aSAH, a documented endovascular coiling procedure during the encounter, and initiation of seizure prophylaxis. A list of patients within the time frame of our study and admitting diagnosis of aSAH will be generated via SlicerDicer in Epic. The primary outcome will evaluate seizure incidence after discontinuation (less than 3 days) of prophylactic levetiracetam during hospital admission.

Further analysis will be conducted, aiming to identify which aSAH patients are at a greater risk of developing seizures post-endovascular coiling and arguing for a longer duration or continuation of seizure prophylaxis. Analysis and interpretation of results are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparing The Rates Of Incidence Of Necrotizing Enterocolitis (Nec) And Associated Morbidity And Mortality In Neonatal Patients Receiving Cefotaxime Vs Ceftazidime: A Retrospective Analysis

Author: Tuba Jaherun

Primary Preceptor: Cassandra Collins

Institution: OSF Healthcare Saint Francis Medical Center and OSF Healthcare Children's Hospital of Illinois

Abstract:

Necrotizing enterocolitis (NEC) is one of the most severe infections diagnosed in premature infants, thus increasing mortality. The highest incidence is seen in patients with low gestational age, low birth weight, genetic factors, and formula feeding. These same risk factors contribute to infections such as meningitis and neonatal sepsis. Cefotaxime is preferred for both indications because of its lower nephrotoxicity and better CNS penetration; however, manufacturing discontinuation has necessitated the use of ceftazidime as an alternative. Both antibiotics have been associated with NEC, with studies suggesting higher rates with ceftazidime. The FDA permits importation of cefotaxime from Canada, adding cost and administrative burden. This study compares NEC outcomes between ceftazidime and cefotaxime to evaluate the clinical and financial risks and benefits of cefotaxime importation at our institution's children's hospital.

The primary endpoint is to determine whether transitioning from ceftazidime to cefotaxime for empiric treatment of neonatal sepsis and meningitis is associated with a lower incidence of NEC. Secondary endpoints compare severity, morbidity, mortality, hospital length of stay, and duration of antibiotic therapy.

This retrospective cohort study includes patients aged 0 to 44 weeks postmenstrual age (PMA) who were admitted to the Neonatal ICU or the Emergency Department. Cohort 1 includes neonates who received at least one dose of ceftazidime (September 2023 to December 2025). Cohort 2 includes neonates who received at least one dose of cefotaxime (January 2025 to August 2025).

Exclusion criteria include receipt of both antibiotics before NEC diagnosis or at an outside institution, age greater than 44 weeks PMA, transfer after NEC diagnosis elsewhere, or spontaneous intestinal perforation without antibiotic exposure.

Once IRB approval was obtained, data were extracted using healthcare analytics and supplemented with manual chart reviews to ensure completeness and accuracy. The final dataset was analyzed with support from our institutional biostatistician.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Perioperative Antibiotic Prophylaxis

Author: Yunhee Jeong

Primary Preceptor: Kayla Cook

Institution: Mount Sinai Hospital Medical Center

Abstract:

Appropriate perioperative antimicrobial prophylaxis plays a critical role in reducing surgical site infections and ensuring optimal patient outcomes. Current clinical guidelines recommend administering most antibiotic prophylactic doses within 60 minutes prior to surgical incision. For agents requiring prolonged infusion times, administration should be initiated within 120 minutes prior to incision to ensure adequate drug levels at the time of surgery. The primary objective of this study is to evaluate the timing of preoperative antibiotic administration at this urban safety-net hospital, while also assessing key factors such as antibiotic agent selection per indication, appropriate dosing, and intraoperative re-dosing during prolonged procedures.

This study is a retrospective electronic medical record review evaluating perioperative antimicrobial prophylaxis in surgical patients. Adult patients undergoing main operating room procedures who had an indication for preoperative antimicrobial prophylaxis based on surgery type were included. Pregnant patients and takeback surgeries within the same admission were excluded. Baseline demographic information, including hospital length of stay, admission diagnosis, and surgical procedure, was also collected. Following the baseline evaluation period, the results were analyzed and presented for discussion at various committees including Surgical Quality, the Pharmacy and Therapeutics Committee, and Antimicrobial Stewardship. The preoperative antibiotics order sets were revised and approved. An advanced preparation report was incorporated into the pharmacists' workflow to allow antibiotics to be prepared in advance and readily available prior to surgery. To determine the impact of these changes, the criteria used in the baseline study are being applied to evaluate perioperative prophylaxis with updated order sets; data collection following implementation is currently ongoing. Descriptive statistical analyses

will be used to compare perioperative antimicrobial practices before and after implementation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Inpatient Anti-Psychotic De-Escalation Upon Transitions of Care from an ICU Setting

Author: Holly Johnston

Primary Preceptor: Morgan Ridout

Institution: OSF Healthcare Saint Francis Medical Center and OSF Healthcare Children's Hospital of Illinois

Abstract:

Purpose: A common medical condition encountered in intensive care unit patients is acute delirium, with prevalence ranging from 20 to 80%. Antipsychotics are frequently ordered for delirium; however, there are multiple concerns regarding use. The Society of Critical Care Medicine recommends prioritizing nonpharmacological interventions as studies have shown inconsistent benefits of antipsychotics and their potential for adverse effects. Adding to the concern, studies have demonstrated high rates of inappropriate continuation of antipsychotics at discharge. This study evaluated de-escalation of antipsychotics for delirium during transitions of care to the general floor and at hospital discharge.

Methods: This study was a retrospective cohort analysis of patients admitted to a large teaching hospital. Inclusion criteria were adult patients admitted to an intensive care unit (ICU) who received haloperidol, quetiapine, olanzapine, ziprasidone, aripiprazole, or risperidone, for management of ICU-related delirium between January 1, 2023, to December 31, 2024. Exclusion criteria were history of antipsychotic use prior to admission, indication for antipsychotic agents other than ICU-related delirium, pregnancy, patients who expired during index hospitalization, and patients on comfort care or hospice. The primary outcome was the percentage of patients newly initiated on an antipsychotic for the management of ICU-related delirium who remained on antipsychotic therapy upon transfer to a medical floor. Secondary outcomes included: (1) percentage of patients prescribed an antipsychotic medication at hospital discharge, (2) percentage of pharmacist involvement in discontinuation of antipsychotic agent prior to discharge, and (3) for patients who were prescribed antipsychotics at transitions of care points, prevalence of provider documentation for ongoing delirium and need for continued antipsychotics. Electronic

medical records were retrospectively reviewed using data obtained through automated pull and supplemented by manual chart review.

Results and Conclusions: In progress.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of the Efficacy and Safety of Amoxicillin/ Clavulanic Acid Extended-Release for Acute Osteomyelitis at a Veterans Affairs Medical Center

Author: Sandra Jojo

Primary Preceptor: Mark Knaub

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Background: Acute osteomyelitis is a serious bone infection caused by bacteria from ischemia, surgery, or trauma to the bone. Treatment includes immediate surgical intervention to obtain source control, if possible, followed by pharmacologic treatment, such as amoxicillin/clavulanate, active against most common osteomyelitis pathogens including methicillin-susceptible Staphylococcus aureus, Streptococci, Enterococci, gram negative rods and anaerobes. There are limited studies using amoxicillin/clavulanate ER for osteomyelitis; however, the available literature shows oral antibiotic therapy was noninferior to intravenous antibiotic therapy when used during the first six weeks for bone and joint infections. Additionally, pharmacokinetic studies of high dose intravenous amoxicillin/clavulanate have been associated with increased bone penetration but cannot be extrapolated for the efficacy of oral amoxicillin/clavulanate ER tablets. Moreover, current literature is not generalizable to a Veterans Affairs Medical Center's primarily elderly, diabetic, and male veteran population. The purpose of this study is to evaluate treatment outcomes and adverse events of amoxicillin/clavulanate ER for acute osteomyelitis in a veteran population.

Methods: The research project will be a retrospective chart-review of patients with acute osteomyelitis who received amoxicillin/clavulanate ER through a Veterans Affairs Medical Center. All veterans receiving amoxicillin/clavulanate ER between July 1, 2020 to June 30, 2025 will be electronically identified. A chart review will be performed to identify patients who meet inclusion and exclusion criteria. Treatment failure is defined as readmission with recurrent osteomyelitis, change in antimicrobial therapy, or unplanned amputation of the same site within six months of completion of amoxicillin/clavulanate ER treatment.

Results: The results will be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparison of Warfarin Efficacy and Safety in Youngest-Old, Middle-Old, and Oldest-Old Patients with Atrial Fibrillation Enrolled in a Pharmacist-Managed Anticoagulation Clinic

Author: Alka Joseph

Primary Preceptor: Emily McLoughlin

Institution: Resurrection Medical Center - Chicago Resurrection Medical Center -Chicago

Abstract:

Purpose:

The 2023 Beers Criteria discourages warfarin use in elderly due to higher bleeding risk, recommending direct acting oral anticoagulants for non-valvular atrial fibrillation; however, the criteria consider warfarin therapy reasonable in patients who maintained over 70% of time in therapeutic range (TTR) without adverse effects. In one pharmacist-managed anticoagulation clinic, approximately 75% of the patient population are elderly. Given the high proportion of elderly patients on anticoagulation, this study seeks to evaluate the safety and efficacy of warfarin therapy in elderly patients ≥65 years old with atrial fibrillation across three age sub-groups.

Methods:

This was a single-center, retrospective chart review of 130 patients aged ≥65 years old enrolled in a pharmacist managed anticoagulation clinic between August 1, 2023, and August 1, 2025. Participants were stratified into three age groups: youngest-old (65-74 years), middle-old (75-84 years) and oldest-old (≥85 years). The primary endpoint was comparison of %TTR across age groups. Secondary outcomes included TTR ± 0.2, INR >4.5, major bleeding, thromboembolism, use of oral vitamin K, hospitalizations and ED visits. Data points collected included demographic data, indication for warfarin, goal INR range, CHA2DS2-VASc score, HAS-BLED score, number of clinic visits, INR level at visits, major bleeding events, use of oral vitamin K, thrombotic events, and hospitalizations/ED visits.

Results and Discussion:

Of 130 patients reviewed, 93 patients were included in the final analysis. Mean %TTR showed no difference between the three age subgroups: 60.5% ± 19.4 (65-74 years), 58.2% ± 17.6 (75-84 years), and 58.7% ± 18.2 (≥85 years); p = 0.8790. Further analyses are ongoing to evaluate the secondary endpoints of warfarin management across the age subgroups, and the results will be presented at ILPRC and included in the final manuscript to provide a comprehensive evaluation of warfarin therapy in a pharmacist managed anticoagulation clinic.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Infectious Diseases Resident Collaboration with Care Management to Expedite Discharge for Patients Prescribed High-Risk Intravenous Antimicrobials for Outpatient Administration

Author: Sarah Kelly

Primary Preceptor: Joseph Levato

Institution: Advocate Christ Medical Center and Advocate Children's Hospital

Abstract:

Outpatient parenteral antimicrobial therapy (OPAT) is defined by the Infectious Diseases Society of America as at least 2 doses of parenteral antimicrobial therapy on different days without intervening hospitalization. Discharging patients on OPAT facilitates shorter hospital stays, decreased incidence of healthcare-associated infections, reduced readmissions, and substantial savings in healthcare costs. Careful coordination among healthcare providers, patients, and caregivers is necessary to ensure efficient discharge to OPAT. This study aims to assess the impact of a postgraduate year 2 (PGY2) infectious diseases (ID) pharmacy resident partnering with care management to address barriers to discharge involving select intravenous antimicrobials.

This is a single-center, prospective, before-after study evaluating patients prescribed targeted intravenous antimicrobials for discharge in the pre- and post-intervention phases. Patients will be included in the study if they were 18 years of age or older and prescribed one or more of the following intravenous antimicrobials at discharge: cefiderocol, ceftaroline, ceftazidime/avibactam, ceftolozane/tazobactam, daptomycin, ertapenem, isavuconazonium, liposomal amphotericin B, meropenem, micafungin, or vancomycin. The retrospective cohort will include patients prescribed targeted antimicrobials for discharge between September 15, 2024, and January 31, 2025, and the prospective cohort will include patients between September 15, 2025, and January 31, 2026. Key opportunities for ID PGY2 intervention will be discussed with care management prior to start date for prospective cohort. The primary endpoint is hospital length-of-stay. Secondary endpoints include time from medical clearance to patient discharge, cost associated with prolonged admission, resident interventions, and incidence of unscheduled care within 30 days.

Descriptive statistics will be used to report baseline characteristics and outcomes. This study is approved by the Institutional Review Board.

Results and conclusion are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Safety of Undiluted Intravenous Push Levetiracetam and Lacosamide

Author: Lindsay Klesta

Primary Preceptor: Anna Niedzwiecki

Institution: Northwestern Medicine Central DuPage Hospital

Abstract:

Background: Rapid administration of antiseizure medications such as levetiracetam (LEV) and lacosamide (LCM) is of utmost importance in the treatment of patients presenting with status epilepticus. Known adverse effects of these medications include hypotension, bradycardia, tachyarrhythmias, infusion site reactions, cognitive dysfunction, and prolonged PR intervals with lacosamide. While studies have shown success with undiluted rapid administration of LEV and LCM when compared to short, diluted infusions, the safety of undiluted intravenous push has not been well established.

Purpose: To assess the safety and tolerability of undiluted intravenous push LEV and LCM in a community hospital.

Methods: This retrospective cohort review will evaluate the incidence of adverse effects with undiluted intravenous push levetiracetam and lacosamide in adult patients at a community hospital from February 2024 to August 2025.

Outcomes & Impact: The primary outcome is the incidence of any adverse event related to undiluted intravenous push administration of LEV and LCM. The secondary outcome is the incidence rates of adverse events by type.

Key Takeaways: This review will help to confirm the safety profile of undiluted intravenous push LEV and LCM.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Risk Factors for Iatrogenic Opioid Overdose Requiring Naloxone in Hospitalized Adults: A Case-Control Study

Author: Luke Klinefelter

Primary Preceptor: Manar Kandil

Institution: OSF Saint Anthony Medical Center

Abstract:

In-hospital naloxone administration is a key indicator for patient safety in opioid stewardship. While risk assessment tools exist for opioid safety, no such risk index specific for hospitalized patients exists, limiting proactive intervention. This study aims to identify risk factors for iatrogenic opioid overdose requiring naloxone administration for reversal.

This is a retrospective, multi-center, case-control study analyzing patient risk factors for emergent opioid overdose across 16 hospitals. Adult inpatients who received opioid therapy during hospitalizations from 10/1/2024 to 9/30/2025 were included. The primary outcome was iatrogenic opioid overdose requiring naloxone administration for reversal. Baseline characteristics and risk factors as found in the Risk Index for Overdose or Serious Opioid-Induced Respiratory Depression (RIOSORD) were collected. Secondary outcomes included total naloxone administration by facility, opioid agents used, opioid route of administration, average total daily morphine milligram equivalents (MME), average length of stay, mortality during admission, and validity assessment of a risk index for the inpatient population. Data was extracted from the electronic health record with manual chart review where necessary. A total patient population of 54839 was collected with 162 patients experiencing a potential iatrogenic overdose. Risk factors will be evaluated using an appropriate univariate test followed by multivariable logistic regression. The secondary endpoint risk index will then be examined using multiple logistic regression and a Hosmer-Lemeshow test.

Data analysis and final results will be presented at ILPRC.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Current Practices in the Management of Severe Hyponatremia

Author: Anna Knebel

Primary Preceptor: Kourtney Engele

Institution: St. Elizabeth's Hospital - Hospital Sisters Health System

Abstract:

Purpose: Severe hyponatremia has been associated with high mortality rates of up to 50% in hospitalized patients with a serum sodium <120 mEq/L. Prompt treatment is necessary, but rapid correction of serum sodium levels can lead to osmotic demyelination syndrome, a serious neurologic condition. Although recommendations regarding the management of severe hyponatremia differ slightly between publications, treatment generally includes hypertonic saline boluses with the goal of increasing serum sodium by 6 to 8 mEq/L in the first 24 hours. This study aims to evaluate the appropriateness of current treatment of severe hyponatremia throughout a thirteen-hospital health system.

Methods: A multi-center, retrospective review was conducted in adult patients with severe hyponatremia, defined as a serum sodium of 120 mEq/L or less. Patients aged 18 years and older with severe hyponatremia during admission from September 1, 2024 through August 31, 2025 were included in the study. Patients were excluded if they had a known diagnosis of diabetes insipidus, were pregnant or breastfeeding, had a concurrent serum glucose of greater than 400 mEq/L, or were on dialysis. Baseline demographic information collected included age, past medical history, and relevant medications administered during hospital stay. The primary endpoint was to determine the number of patients with severe hyponatremia that achieved an increase in serum sodium by 6 to 8 mEq/L in the 24-hour period after their first sodium level of 120 mEq/L or less. Secondary endpoints examined the number of hours to reach a serum sodium greater than 130 mEq/L, the number of patients receiving 3% hypertonic saline during admission, and length of stay. Data was collected through electronic health record reports and chart review. PHI is stored on password-protected documents only accessible by on-site computers. This study has

received IRB approval. Data collection is ongoing. Results will be reported pending final data analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluating Smart Pump Interoperability and Guardrails Compliance Across a Multihospital System: Trends, Barriers, and Medication-Level Insights

Author: Samantha Knudson

Primary Preceptor: Joshua Schmees

Institution: St. Elizabeth's Hospital - Hospital Sisters Health System

Abstract:

Purpose:

Interoperability with Electronic Health Records (EHR) and Smart Infusion Pumps is a big step forward for patient safety. According to the Institute for Safety Medication Practices (ISMP), pump interoperability can reduce infusion related medication error associated with manual programming, incorrect drug selection, wrong concentration, wrong rate, and incorrect patient weight. However, integration may also introduce unintended challenges such as override burden, alert fatigue, and higher total infusion volume, which may target a need for drug-library review and optimization.

Methods:

Evaluate pump interoperability safety using three high-value pharmacy operational metrics: DERs compliance, interoperability compliance, and guardrail alert/override behavior. These outcomes provide hospital level insight into infusion safety and drive drug-library updates that are part of the core ISMP CQI expectations. Hospitals falling below predetermined performance thresholds will be evaluated at the drug level to identify specific medications contributing to reduced DERS use, elevated alert/override burden, or low interoperability adoption. Drug-level findings will be used to determine whether targeted drug-library updates or workflow optimizations are warranted.

Results and Conclusion: In Progress

Reference:

Institute for Safe Medication Practices. ISMP Guidelines for Optimizing Safe Implementation and Use of Smart Infusion Pumps. ISMP; 2020 words)

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: MRSA Nasal Swab Performance in ICU Patients with Non-Pneumonia Infections

Author: Lauren Komberec

Primary Preceptor: Andrew DeSio

Institution: Loyola University Medical Center

Abstract:

Purpose

A MRSA nasal swab is a rapid, non-invasive screening method to detect colonization of Methicillin-Resistant Staphylococcus aureus (MRSA). MRSA nasal screening has been shown to have strong negative predictive value in patients with pneumonia, supporting its role in guiding antimicrobial de-escalation. However, the utility of MRSA nares screening for other infections remains unclear. This study aims to address this knowledge gap by assessing the predictive value of MRSA nasal swabs in ICU patients admitted with infections other than pneumonia. Findings from this project may provide insight into whether MRSA screening can be reliably applied beyond bacterial pneumonia to support antimicrobial stewardship and reduce unnecessary antibiotic exposure in critically ill patients.

Methods

The objective of this study is to determine the negative predictive value of the index MRSA swab in ICU patients that are diagnosed with a non-pneumonia infection from September 2020 through September 2025. The primary endpoint is sensitivity and specificity of MRSA nares for non-pneumonia infections in ICU population, and secondary endpoints include sensitivity and specificity of MRSA nares for SSTI, intra-abdominal infection, abscess, meningitis, and osteomyelitis. Patients will be included (n=100) if they are at least 18 years of age, have a MRSA nares swab collected, are admitted to ICU service, have a culture

drawn within 1 week of MRSA nares, and are diagnosed with one of the following infections: SSTI, intra-abdominal infection, abscess, meningitis, or osteomyelitis. Patients will be excluded if they are diagnosed with pneumonia, are pregnant, are incarcerated, have had mupirocin administered within 30 days prior to MRSA swab, or have already been included in the study. Continuous variables will be compared using t test or Mann–Whitney U test, and categorical variables compared using a chi-square or Fisher's exact test. Statistical significance will be defined as $p<0.05$. Results of this study are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Real-World Evaluation of Patient Utilization and Satisfaction with Lenacapavir Injections for HIV Pre-Exposure Prophylaxis

Author: Ena Kovac

Primary Preceptor: Drew Halbur

Institution: Walgreens Pharmacy and the University of Illinois at Chicago, College of Pharmacy

Abstract:

Over the past decade, HIV pre-exposure prophylaxis (PrEP) has evolved from daily oral regimens to long-acting injectable formulations, expanding prevention options. The approval of lenacapavir in June 2025 introduced a novel twice-yearly injectable PrEP administered with a brief oral loading regimen (two tablets at the first injection and two tablets 24 hours later). Although the PURPOSE 1 and PURPOSE 2 trials demonstrated high efficacy and favorable tolerability, real-world data on patient satisfaction and acceptability remain limited.

This study evaluated patient satisfaction, administration experiences, side effects and overall acceptability of lenacapavir injections in a large Midwest Primary Care Health Center in Chicago, Illinois. Secondary objectives assessed patient acceptability of pharmacy-based versus provider-based injection delivery and identified demographic and behavioral characteristics of early adopters. Eligible participants were adults aged ≥18 years who initiated lenacapavir on or after July 1, 2025, and filled prescriptions at three community-based specialty pharmacies embedded within a health center. Individuals unable to provide verbal consent or complete an English-language telephone survey were excluded.

Thirty-nine participants completed a 10–15-minute structured telephone survey. The 16-item instrument incorporated the validated Acceptability of Intervention Measure (AIM) Likert scale and an adapted Administration and Dosing Questionnaire derived from the PURPOSE 2 trial, supplemented with demographic and clinical data from pharmacy databases. Data were collected using REDCap and were analyzed descriptively.

Injection site reactions were reported by 36 participants; 23 rated these reactions as acceptable or very acceptable. Among 24 participants reporting injection site pain, half considered the pain acceptable or very acceptable. Overall, 34 of 39 participants rated the injection experience as acceptable or very acceptable. Three discontinued treatment due to infection, injection site complications, or cost. Most respondents expressed approval and interest in future pharmacy-based administration.

These findings provide real-world evidence to inform patient-centered PrEP delivery and support evidence-based clinical decision-making.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluating the Impact of Clinical Pharmacy Practitioner (CPP) Patient Aligned Care Team (PACT) Services on Type 2 Diabetes Management in Veterans Transitioned from Community Care

Author: Adrienne Kue

Primary Preceptor: Angela Dylewski

Institution: VA-Danville, IL-VA Illiana Health Care System

Abstract:

Purpose: In rural Veteran Affairs (VA) healthcare systems, care in the community (CITC) ensures equitable access for Veterans. However, coordination between non-VA CITC providers and VA services can be difficult. This creates opportunities for CPPs to help provide continuity of care. The purpose of this project was to characterize the patient populations most likely to have meaningful clinical improvement when managed by Clinical Pharmacy Practitioners (CPPs), as well as evaluate the role CPPs play in optimizing outcomes for patients transitioning from community care back into the VA healthcare system.

Methods: Retrospective chart reviews were conducted on patients with type 2 diabetes mellitus who transitioned from CITC to CPP management between February 1, 2024, and February 1, 2025. Data was collected for up to 12 months from the date of patient enrollment in the CPP clinic or a shorter period if 12 months of data was unavailable. These patients were evaluated against a comparator group who continued to be seen by CITC. Data was sourced from Joint Longitudinal Viewer (JLV) and Computerized Patient Record System (CPRS). The primary endpoint is the difference in change in A1c from baseline over a period of 12 months between CPP managed patients and CITC

patients. Secondary endpoints included: change in daily medications before and after CPP management, change in daily insulin dose, number of interventions, disease states managed, initiation of SGLT-2 inhibitors/GLP-1RA in patients with established ASCVD/CKD, follow-up appointments with endocrinology or CPP, frequency of A1c draws, patients with an A1c at goal, A1c less than 8%, patients started on a continuous glucose monitor, presence of documented hypoglycemia, and adverse events reported. Descriptive statistics will be used to characterize results.

Results/Conclusion: pending completion of study

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Pharmacist-Led Management of Weight Loss Medications in the VA System

Author: Samantha Kueter

Primary Preceptor: Sherry Hoang

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Title: Pharmacist-Led Management of Weight Loss Medications in the VA System

Author: Samantha Kueter, PharmD, PGY-1 Pharmacy Resident

Preceptors: Sherry Hoang, PharmD, BCPS and Nick Super, PharmD, BCACP

Institution: VA – Hines, IL – Edward Hines Jr. VA Hospital

Abstract:

Purpose:

To compare the management of weight-loss pharmacotherapy by clinical pharmacist practitioners versus non-pharmacist providers. The study aims to evaluate weight-related outcomes and determine whether pharmacist-led management achieves comparable or improved results. Demonstrating favorable outcomes with pharmacist-led care highlights the potential for pharmacists to provide collaborative support for weight management, especially given the high patient volume in the primary care teams.

Methods:

This retrospective cohort study will include Veterans aged 18 years or older who were prescribed weight-loss pharmacotherapy between October 1, 2024, and October 30, 2025, by either a clinical pharmacist practitioner or a non-pharmacist provider within my institution. Eligible participants must have at least three months of follow-up data available. Exclusion criteria include current use of weight-loss pharmacotherapy (including all GLP-1s) at baseline, bariatric surgery prior to the study period, pregnancy or planned pregnancy during the study period, inadequate follow-up (fewer than two weight-loss visits), inadequate adherence (fewer than two refills of the same medication), and lack of

weight data at specified time points for 3, 6, and 12 months. Primary outcomes will include mean weight loss at 3, 6, and 12 months and the proportion of patients achieving ≥5% and ≥10% weight loss. Secondary outcomes will include clinic utilization measures (total number of visits and time from prescription to first follow-up), changes in LDL cholesterol and hemoglobin A1c in patients with type 2 diabetes, rates of medication discontinuation, and prescribing patterns with associated weight-related outcomes stratified by management type.

Summary of Results:

Ongoing. To be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Bleeding Risk Evaluation with Heparin Following Factor Xa Inhibitor Therapy

Author: Alyssa Kuhn

Primary Preceptor: Shannon McCabe

Institution: Northwestern Memorial Hospital

Abstract:

Background: The standard of care for monitoring unfractionated heparin (UFH) infusions at this tertiary academic medical center is to monitor anti-Xa (AXA) levels to ensure appropriate anticoagulation. When transitioning from a DOAC or therapeutic enoxaparin to therapeutic UFH, institutional practice is to initiate UFH at the next scheduled dose and to monitor with activated partial thromboplastin time (aPTT). Despite this practice, the risks of bleeding and thrombosis when transitioning to UFH remain unclear. Interpretation of AXA levels is complicated by recent exposure to direct oral anticoagulants (DOAC) or therapeutic enoxaparin, as both inhibit factor Xa. This study evaluates bleeding and thrombotic outcomes in patients transitioned from a DOAC or enoxaparin to UFH in relation to baseline AXA levels.

Methods: This retrospective cohort study will include adult patients admitted with at least one AXA level drawn during admission who received apixaban, rivaroxaban, edoxaban, or enoxaparin within 72 hours prior to obtaining a baseline heparin AXA level or who had a detectable heparin AXA concentration before initiating a UFH infusion. Patients will be excluded if a bleeding event occurred after the last dose of a DOAC or therapeutic enoxaparin but prior to UFH infusion, if the timing of the last DOAC or enoxaparin dose is unknown, if admitted directly to the ICU, if transitioning from prophylactic enoxaparin to UFH, or if a bleeding event occurs more than 5 days after UFH infusion initiation.

Outcomes: The primary outcome will be the incidence of major bleeding events within 5 days of UFH infusion initiation. Secondary outcomes will include the type of major bleeding event, incidence of thrombotic events within 5 days of UFH initiation, and correlation between heparin AXA levels and DOAC or enoxaparin AXA levels.

Future Directions: Findings may inform safer UFH initiation strategies following recent factor Xa inhibitor exposure.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Development and Implementation of a Standardized Standing Order and Procedural Manual Template for Pharmacist-Managed Ambulatory Care Clinics

Author: Ashley LaMonto

Primary Preceptor: Matthew Biszewski

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose:

At this organization, there are pharmacist-managed ambulatory clinics across four services with standing orders approved by the Pharmacy and Therapeutics (P&T) Committee that allow pharmacists to independently manage patient's medications. Currently, rather than utilizing a standardized template, each clinic has its own standing order and procedural manual, resulting in variations in format and content. The inconsistencies cause variability and delays the P&T submission process.

The purpose of this project is to develop and implement standardized templates for current standing orders and procedural manuals. This creates a framework that supports updates for the annual renewal period and future pharmacist-driven services.

Methods:

This quality improvement project is exempt from Institutional Review Board review. A meeting was conducted with the representatives from each ambulatory care service and P&T representative to review and compare the existing standing orders. Essential components from all existing standing orders were identified and incorporated into the template while nonessential content was removed and relocated to the procedural manuals. Feedback from these discussions was used to create a standardized template that can be used across all clinics for the next P&T renewal period, and for the establishment of future ambulatory pharmacy services.

State regulations and guidance documents on standing orders for pharmacist-managed clinics were reviewed. These resources define standing orders as non-patient specific

protocols that delegate clinical responsibilities, require a clear scope, regular review, and standardized formatting. Key elements were incorporated into the development of this organization's standing order template to ensure compliance with regulations and best practices prior to implementation.

Results: Pending

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of the Incidence, Management, and Outcomes of Hypoglycemia in Critically Ill Patients

Author: Mikayla Lang

Primary Preceptor: Tania Tania Wygonowski

Institution: Advocate Lutheran General Hospital

Abstract:

Background: Hypoglycemia is a frequent and serious complication in critically ill patients, often resulting from intensive glucose control, underlying illness, or nutritional challenges. It occurs nearly four times more frequently in the intensive care unit (ICU) than non-ICU settings with a reported incidence between 3.7% to 45%, largely due to inconsistent definitions in the literature. Hypoglycemia is associated with significant morbidity, including irreversible neurologic injury, arrhythmias, seizures, need for mechanical ventilation, increased hospital length of stay (LOS), higher costs, and increased mortality with a dose-response relationship. Currently, hypoglycemia is managed using the regional standardized order set, which varies by patient status and includes multiple rescue agents (intravenous dextrose, intramuscular glucagon, oral dextrose, and juice). However, limited institution-specific data exist regarding the prevalence, risk factors, and management of hypoglycemia in critically ill patients. This study aims to determine the incidence of hypoglycemia in the Medical Intensive Care Unit (MICU) at an academic medical center, evaluate the use and effectiveness of rescue agents, and assess insulin-related adverse outcomes, and dosing protocol impacts.

Methods: This retrospective quality improvement study will include adults (≥18) admitted to the MICU for > 24 hours with at least one hypoglycemic episode (blood glucose ≤ 70mg/dL) between July 1, 2020, through July 31, 2025. A random sample to evaluate 155 patients will be analyzed. Exclusion criteria include < 18 years old, MICU stay < 24 hours, expected imminent death, diabetic ketoacidosis (DKA) or hyperosmolar hyperglycemic state (HHS), missing glucose data, fulminant liver failure, pancreatic cancer, or comfort care status. The primary outcome is the incidence of hypoglycemia during MICU admission. Secondary outcomes include mortality, MICU LOS, organ dysfunction,

neurologic effects, rebound hyperglycemia, rescue agent utilization, and glucose reassessment after treatment.

Results: Data collection ongoing

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Dual vs. Single Antiplatelet Therapy After Noncardioembolic Ischemic Stroke or Transient Ischemic Attack

Author: Liam Le

Primary Preceptor: Ashley Unger

Institution: St. Elizabeth's Hospital - Hospital Sisters Health System

Abstract:

Purpose: Dual antiplatelet therapy (DAPT) is recommended for select patients with minor non-cardioembolic ischemic stroke or high-risk transient ischemic attack (TIA) when initiated early. This study evaluated real-world prescribing patterns of DAPT versus single antiplatelet therapy (SAPT) and assessed concordance with contemporary guideline recommendations.

Methods: This retrospective, observational cohort study was conducted at a 160-bed community-based teaching hospital in Southern Illinois. Adult patients admitted with non-cardioembolic ischemic stroke or TIA between January 1, 2023, and October 14, 2025, were identified through electronic health records for inclusion in the study. Patients receiving anticoagulation, thrombolytic therapy, or recent DAPT therapy (≤7 days prior to the index event) were excluded. The primary outcome was guideline-concordant antiplatelet initiation at discharge based on 2021 AHA/ASA criteria. Secondary outcomes included recurrent ischemic stroke or TIA and major bleeding events within 90 days of discharge.

Results: A total of 247 patients met inclusion criteria and were included in the analysis. At discharge, 74% (n=184) were prescribed DAPT, and 26% (n=63) received SAPT. Among patients discharged on DAPT, 79% (n=145) did not meet guideline criteria, compared with 16% (n=10) of patients in the SAPT group. Within 90 days, recurrent ischemic stroke or TIA occurred in 12% (n=22) of patients receiving DAPT and 6% (n=4) of those receiving SAPT. Among DAPT recipients with recurrent events, 8% (n=14) occurred in patients receiving non–guideline-concordant therapy, while 4% (n=8) occurred in patients treated according to guidelines. Major bleeding events were rare, occurring in 0.5% (n=1) of patients in the DAPT group and in no patients in the SAPT group.

Conclusions: Overall, DAPT was prescribed more frequently than SAPT; however, patients receiving DAPT experienced higher rates of recurrent ischemic stroke or TIA. These findings demonstrate no obvious clinical advantage to ubiquitous DAPT use and highlight the importance of guideline-concordant antiplatelet selection following non-cardioembolic ischemic stroke or TIA.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Assessing the Impact of a Pharmacist-Led Weight Loss Medication Management Program in a Veteran Population

Author: Taylor Lueder

Primary Preceptor: Suzanne Chau

Institution: VA - North Chicago, IL - Captain James A. Lovell Federal Health Care Center

Abstract:

Purpose: Obesity is highly prevalent among U.S. Veterans and is associated with significant cardiometabolic morbidity, mortality, and healthcare costs. Although effective pharmacologic options exist, their use is limited by barriers such as provider time constraints, competing clinical priorities, and lack of patient follow-up. Pharmacists are uniquely positioned to improve access, optimize therapy, and provide ongoing counseling and medication management. This project aims to evaluate the impact of a pharmacist-led weight loss medication management program on weight loss outcomes in Veterans at a federal health care center.

Methods: This is a single-center, retrospective quality assurance/quality improvement (QA/QI) project analyzing weight loss medication prescribing patterns and amount of weight lost among Veterans. Eligible participants will include Veterans aged ≥18 years with a BMI ≥30 kg/m^2 or ≥27 kg/m^2 with an obesity-related comorbidity who were enrolled in a pharmacist-led weight loss clinic for ≥3 months and prescribed a weight loss medication between March 2024 and September 2025. Data will be extracted from the electronic health record, including baseline demographics, comorbidities, weight, BMI, medication prescribing patterns, and follow-up weights at 3, 6, and 12 months. The primary outcome will be the change in body weight from baseline. Secondary outcomes will include the proportion of Veterans achieving ≥5% weight loss, the proportion of Veterans achieving maximum tolerating doses of weight loss medications, the proportion of Veterans that discontinued weight loss medication(s) and reason(s) for discontinuation, number and frequency of pharmacist encounters, and changes in A1c, blood pressure, and lipid levels. Data will be analyzed using descriptive statistics, as well as paired t-tests for continuous variables and Wilcoxon signed rank tests for ordinal variables.

Results: Not yet available, research-in-progress.

Conclusion: Not yet available, research-in-progress.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Aspirin vs. Warfarin Post Bioprosthetic Valve Replacement

Author: Harrison Lyckman

Primary Preceptor: RaeAnn Hirschy

Institution: Loyola University Medical Center

Abstract:

Purpose:

Valvular heart disease is a prevalent health condition affecting millions of people worldwide, most commonly impacting the aortic and mitral valve. Mechanical or bioprosthetic valve replacement may be indicated in cases of severe valve dysfunction. Common post valve complications include bleeding and thrombosis making proper management with aspirin and/or warfarin essential. Despite the long history of bioprosthetic valve replacements the guidelines and literature behind antiplatelet and anticoagulant use post-replacement varies; and data following bioprosthetic mitral valve replacement is lacking. Due to this lack of clear guidance, clinical practice varies widely by institution, surgeon, and/or valve position.

This research seeks to evaluate rates of adverse cardiovascular and thromboembolic events after bioprosthetic aortic and/or mitral valve replacement in patients receiving aspirin therapy compared to patients receiving warfarin therapy with or without aspirin.

Methods:

This is a retrospective, single-centered, observational, cohort study of patients post bioprosthetic valve replacement admitted to the Cardiovascular Intensive Care unit (CVICU) at an academic medical center. Patients with a bioprosthetic aortic and/or mitral valve replacement and on either aspirin and/or warfarin will be included. Patients will be excluded if: on anticoagulation other than warfarin, antiplatelet use other than aspirin, previous transient ischemic attack (TIA) or cerebrovascular accident (CVA), previous myocardial infarction (MI) or actively receiving treatment for endocarditis. Electronic medical records will be retrospectively reviewed over the time period of July 1st, 2015- to July 30th, 2025. The comparator groups will evaluate aspirin use alone versus warfarin with

or without aspirin. The primary endpoint is a composite of cardiovascular death, non-fatal myocardial infarction, and non-fatal stroke at 90 days. Secondary and safety endpoints include: 90-day all-cause mortality, non-fatal MI, CVA/TIA, venous thromboembolism, new atrial fibrillation and bleeding events.

Results:

Results and data collection are pending and will be presented at the ILPRC conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Phased Optimization of Pharmacist Discharge Medication Reconciliation Across a Multi-State Enterprise Using Real-Time EHR Prioritization

Author: Heeba Mahmood

Primary Preceptor: Patricia Cantieri

Institution: Advocate Good Shepherd Hospital

Abstract:

Purpose: Pharmacist-led discharge medication reconciliation (DCMR) review improves medication safety during transitions of care; however, inconsistent notification methods and workflow variability limit reliability across large health systems. An enterprise request was submitted to Pharmacy Governance to evaluate and standardize DCMR processes across a multi-state integrated health system. National guidance supports standardized, technology-enabled DCMR review workflows, however, an enterprise-wide survey of 46 hospitals across four states revealed heterogeneous notification methods, variable workflow standardization, and unclear discharge signaling as a leading time-related barrier. Despite pharmacist recommendations being accepted approximately 75–90% of the time, inconsistent triggers limited timely intervention. This quality improvement initiative aims to optimize and standardize DCMR prioritization across one of the largest health systems in the country.

Objective: To evaluate current pharmacist DCMR review workflows across a multi-state enterprise health system, identify variability and key barriers, and inform development of a standardized, enterprise-wide DCMR review process. Methods:

Methods: A cross-sectional electronic survey was distributed to inpatient pharmacy leaders representing 46 hospitals across four states to assess current DCMR workflows. Survey domains included discharge notification methods, workflow standardization, perceived timeliness, non–time-related barriers, and overall satisfaction. Results were analyzed descriptively to identify variability and system-level barriers.

Based on survey findings, a multidisciplinary DCMR workgroup was formed in collaboration with the Transitions of Care (TOC) Core Committee and enterprise EHR informatics teams

to design a phased optimization strategy. Phase I focuses on improving real-time discharge visibility through implementation of two electronic health record patient list filters: (1) identification of patients with signed discharge orders requiring pharmacist review and (2) identification of patients whose discharge medications were added or modified after pharmacist review, prompting re-evaluation. Phase II will incorporate development of a composite DCMR prioritization score within the EHR to stratify discharge patients using predefined risk elements including Meds-to-Go utilization, polypharmacy, heart failure, anticoagulant use, renal impairment (creatinine clearance <30 mL/min), insulin therapy, number of recent emergency room visits and/or hospital admissions in the last 180 days. An evaluation framework was established to measure real-time identification of prioritized discharges, DCMR completion rates, and review timeliness following planned implementation.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Increasing Prescription Capture Rate Through a Medication Discharge Program at a Community-Based Orthopedic Hospital

Author: Rupanshi Malik

Primary Preceptor: Kevin Louie

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Timely access to discharge medications is vital for ensuring adherence, reducing treatment delays, and supporting safe care transitions. Studies indicate that 24-28% of patients fail to fill one or more discharge prescriptions at off-site pharmacies within 30 days post-discharge, revealing a significant gap in care. Many patients face barriers such as transportation, pharmacy access, cost, and prescription processing delays at off-site pharmacies. This project is being conducted at a community-based hospital specializing in orthopedic and spine surgical cases, with an on-site outpatient pharmacy, and is being piloted with Ambulatory Surgical Unit (ASU) and Post-Anesthesia Care Unit (PACU). The purpose of this project is to increase the volume of discharge prescriptions dispensed at the outpatient pharmacy for patients from ASU/PACU through the implementation of a Meds-in-Hand (MIH) program. The MIH program aims to provide patients' caregivers the opportunity to pick up medications from the outpatient pharmacy prior to discharge. A similar program implemented at another outpatient pharmacy within our health system was modified to fit the requirements of this project.

This quality improvement project is exempt from Institutional Review Board review. A standardized MIH workflow for ASU/PACU was collaboratively created by the surgical care team and the outpatient pharmacy team. An additional workflow for the outpatient pharmacy was modified from an existing MIH framework. The outpatient pharmacy and the ASU/PACU teams were educated on the workflows. Baseline discharge prescription volume and prescription capture rates were collected during the pre-implementation period (10/01/25-10/29/25) and will be compared with post-implementation period (02/03/26-03/03/26) to evaluate the impact of the intervention. The primary objective is to increase the prescription capture rate through the implementation of the MIH program. The

secondary objective is to evaluate the change in patient capture rate during the pre- and post-implementation periods. Descriptive statistics will be used to analyze the data.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Standardization of pharmacist competencies within a newly merged health system

Author: Stacey Manahan

Primary Preceptor: Joycemon Lukose

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Nine community-based hospitals were merged into one health system over the last five years. Efforts have been made to standardize policies and clinical guidelines within these hospitals to provide seamless patient care between them. By doing so, there was a need to create standardized competency training for pharmacists to ensure consistency in the care provided. This also provided an opportunity to condense and contemporize competencies to reflect current practices and the system's values. The purpose of this project is to describe the standardization of pharmacist competency training within this health system. This project will promote consistent patient care within the system pharmacy by defining core competencies for all pharmacists.

A competency was defined as virtual training modules assigned and distributed to pharmacists annually. Initial pharmacist competencies that are assigned as part of on-boarding and orientation and pharmacy technician competencies were excluded from this standardization project as they need to contain site-specific information. Pharmacy leadership from each hospital met monthly to determine the core competency contents to be assessed. Individual hospital competency lists were compared, and similar competencies were edited to create a new standardized version. Relevant competencies that were present in some hospitals, but not others, were updated and adopted across all hospitals. Five new competencies were created to assess compounding and calculations, clinical pharmacy application, stroke pathways, controlled substance diversion prevention, and order verification.

Results are pending as new competencies are under review by respective subject matter experts. The next step is to determine when to assign the new competencies.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Effectiveness of Naloxone Take-Home Kit Distribution in Preventing ED Readmission

Author: Nada Mansour

Primary Preceptor: Jennifer Oderinde

Institution: Saint Mary of Nazareth Hospital - Chicago

Abstract:

Background: A number of healthcare facilities have implemented risk-reduction strategies in response

to the opioid epidemic such as take-home naloxone (THN) kit programs, where patients admitted for an

opioid overdose are discharged with free naloxone kit. After implementation of a such a protocol at a

medium-sized community hospital in Chicago, this study hopes to elucidate whether a clinically positive

relationship was demonstrated between distribution of THN kits and rates of readmission due to opioid

overdose.

Objective: Determine whether implementation of a THN protocol at the hospital's emergency

department (ED) has demonstrated a significant difference in 30- and 90-day readmission rates for

opioid overdose.

Methods: This retrospective chart review will assess the hospital encounters of adult patients admitted

to the ED for an opioid overdose between January 2020 and January 2024. Any readmissions within 90

days of the initial encounter relating to opioid abuse will be counted towards the primary endpoint. A

chi-square test will then be used to determine whether the 30- and 90-day readmission rates are

statistically different using an α level of 0.05. The causative agents for the overdose encounters will also

be recorded.

Results: A total of 287 patient charts were reviewed. There was no statistically significant difference

between 30-day or 90-day readmission rates for events relating to opioid abuse when comparing before

and after the THN kit protocol implementation. 0.11% of patients experienced a readmission within 30

days in the pre-implementation group versus 0.12% in the post-implementation group ($p = 0.2$). 0.11%

of patients experienced a readmission within 90 days in the pre-implementation group versus 0.06% in

the post-implementation group ($p = 0.09$).

Conclusion: Despite a decrease in the number of opioid-related readmissions after the implementation

of the THN protocol, no statistically significant change was demonstrated in 30- or 90-day readmission

rates for opioid-related events.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of a Psychiatric Clinical Pharmacist Practitioner on Clinical Outcomes and Routine Monitoring Associated with Long-Acting Injectable Administration at a Veterans Affairs Medical Center

Author: Alexis Marcon

Primary Preceptor: Ijeoma Onyema

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose: The purpose of this quality improvement (QI) project was to assess the impact of a Psychiatric Clinical Pharmacist Practitioner (CPPs) within the Mental Health Long-Acting Injectable (MHLAI) Clinic at a Veterans Affairs Medical Center.

Methods: This QI project evaluated monitoring outcomes of patients receiving a long-acting injectable (LAI) before and after Psychiatric CPP implementation within the MHLAI Clinic. Patients were included if they received an outpatient LAI for a mental health or substance use disorder, had at least one MHLAI Clinic visit in the pre-CPP and post-CPP implementation periods, and had two or more Psychiatric CPP visits in the MHLAI Clinic. Patients were excluded if they were under 18 years old, received a buprenorphine LAI, had fewer than two Psychiatric CPP visits in the MHLAI Clinic, or were without LAI administration in both the pre-CPP and post-CPP implementation periods. A retrospective electronic chart review was conducted for each visit to review progress notes, vitals, and labs. The primary endpoint examined the percentage of recommended medication monitoring completed. Secondary endpoints examined appointment and LAI administration adherence. Exploratory endpoints examined the number and type of interventions recorded, the number of Psychiatric CPP recommendations, the number of Psychiatric CPP recommendations accepted by prescribers, and the percentage of side effects identified.

Results: Pending.

Conclusion: Pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparison of 1-day vs 2-day melphalan infusion in adults undergoing Autologous Stem Cell Transplant

Author: Estefania Marin

Primary Preceptor: Michael Schmidt

Institution: Advocate Lutheran General Hospital

Abstract:

Background: Multiple myeloma (MM) is a plasma cell malignancy for which high dose melphalan followed by autologous stem cell transplant (ASCT) remains a cornerstone of therapy in eligible patients. While both single-day and split-dose melphalan regimens are widely used, limited evidence directly compares their impact on patient outcomes and healthcare operations. The dosing schedule may influence transplant-related toxicities, hospitalization, and pharmacy workflow, yet current data are heterogeneous and inconclusive.

Objective: This project reviewed existing data from our institution to compare clinical and operational outcomes in patients with MM undergoing ASCT who receive high-dose melphalan as either a 1-day or 2-day regimen.

Methods: This retrospective quality improvement initiative evaluated adults (≥18 years) who underwent ASCT with melphalan conditioning between January 2020 and August 2025. Patients will be looked at based off two regimens: (1) single-day administration (200 mg/m^2 on day –1) or (2) split-dose administration (100 mg/m^2 on days –2 and –1). The

primary outcomes are length of stay, incidence and severity of gastrointestinal and mucosal toxicities, time to engraftment, and febrile neutropenia. Secondary outcomes include 30-day readmission, intensive care unit (ICU) transfer, infection, acute kidney injury (AKI), antimicrobial use, transfusion requirements, and pharmacy workflow measures (compounding time, delays, waste, beyond-use date adherence). Exploratory analyses will describe progression-free and overall survival at 6 and 12 months post-transplant.

Significance: The purpose of this project is to evaluate existing practices and identify opportunities to improve consistency and efficiency in ASCT patient care. Findings will help to improve practice, optimize transplant protocols, and improve resource allocation in both patient care and institutional workflows.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Association of Intravenous Push (IVP) Opioid Exposure on Opioid Prescribing at Hospital Discharge

Author: Erika Maslennikov

Primary Preceptor: G. Randy Smith

Institution: Northwestern Memorial Hospital

Abstract:

Purpose

Intravenous push (IVP) opioid administration produces rapid increases in opioid exposure, enhances dopaminergic signaling, and potentially contributes to opioid-induced hyperalgesia. In comparison to other administration routes, IVP opioid administration has been associated with increased reinforcement potential and misuse risk.

In April 2018, a large academic medical center implemented a policy on hospital medicine floors restricting IVP opioid use to defined clinical indications, requiring documentation and pharmacist intervention before administration, a policy not in place at two affiliated hospitals within the same health system. Since implementation, IVP use has declined without compromising pain control or triggering adverse safety events. However, the association of IVP opioid administration and discharge opioid prescribing patterns remains unclear.

This retrospective study aims to determine the association between inpatient IVP opioid use and opioid prescriptions written at discharge, across hospitals within a single health system with and without IVP restriction policies.

Methods

This study will include adult patients ≥ 18 years of age admitted to the emergency departments and discharged from hospital medicine services between July 2018 and July 2025 and received opioids during their hospital stay. Death, end-of-life or hospice patients, or those admitted via hospital transfer or direct admit will be excluded. The primary independent variable is opioid exposure, characterized by the drug, dose, route, oral

morphine milligram equivalents (MME)/day, and average MME use during hospital stay. The dependent variable is total MME prescribed at discharge. Secondary outcomes include differences in discharge prescribing patterns between policy and non-policy sites and identification of covariates associated with inpatient opioid exposure.

Results and Conclusion

Findings will help clarify the relationship between inpatient IVP opioid exposure and discharge prescribing and inform opioid stewardship initiatives to support the development of systemwide policies.

Results will be presented at the Illinois Pharmacy Resident Conference in May 2026.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of a Pharmacist-Led Antimicrobial Stewardship Intervention on Ceftriaxone Utilization in Hospitalized Patients with Pneumonia and Uncomplicated Urinary Tract Infections

Author: Sara Masoumi Mashhad

Primary Preceptor: Lionel Sielatchom Noubissie

Institution: Endeavor Health Swedish Hospital

Abstract:

Purpose: Ceftriaxone is commonly prescribed for pneumonia and urinary tract infections (UTIs); however, inappropriate use and delayed optimization may contribute to antimicrobial resistance, Clostridioides difficile infection, prolonged hospitalization, and increased healthcare costs. The purpose of this study was to evaluate the appropriateness of ceftriaxone use in pneumonia and uncomplicated UTI, implement guideline-concordant optimization via timely de-escalation and IV-to-enteral conversion and assess the impact of pharmacist-led real-time interventions on stewardship outcomes.

Methods: This quasi-experimental, single-center, pre-post study was conducted at a community teaching hospital and included a retrospective pre-intervention phase (10/1/2024–11/30/2024), an intervention phase (9/1/2025–9/30/2025), and a prospective post-intervention phase (10/1/2025–11/30/2025). Data were collected through review of the electronic medical health record, and post-intervention outcomes were compared with baseline data. Adult inpatients who received at least one dose of ceftriaxone for pneumonia or uncomplicated UTI and had a hospital length of stay of at least 48 hours were included. Patients treated with ceftriaxone for meningitis, surgical prophylaxis, skin and soft tissue infections, other complicated infections, immunocompromised, hospice patients, or discharged within 48 hours were excluded. During the intervention phase, educational in-services were provided to medical teams and pharmacists emphasizing guideline-directed ceftriaxone use, de-escalation based on culture and susceptibility results, and IV-to-enteral conversion. Pharmacists performed daily ceftriaxone order reviews, provided recommendations, and documented interventions in the electronic

medical health record. The primary outcome was change in ceftriaxone days of therapy (DOT) per 1,000 patient days. Secondary outcomes included average ceftriaxone DOT for target infections; number of de-escalations to enteral agents stratified by agent; rate of ceftriaxone use in culture-confirmed infections susceptible to narrower-spectrum agents; hospital length of stay in days; and 30-day readmission and mortality rates.

Results: Data collection and analysis are ongoing.

Conclusion: Final results will be presented at the Illinois Pharmacy Residents Conference following completion of data analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Assessment of Current Practices and Safety Outcomes of Intravenous Push Protamine

Author: Alina McCue

Primary Preceptor: Nicole Leshko

Institution: Northwestern Memorial Hospital

Abstract:

Protamine sulfate is the only available agent for reversal of unfractionated (UFH) and low-molecular weight heparin (LMWH) and is associated with potentially serious adverse effects, including hypotension and anaphylaxis. Although the FDA labeling recommends 50 mg of undiluted protamine to be administered over 10 minutes, real-world practice often deviates from these recommendations. At our institution, order administration comments recommend that doses of protamine less than 50 mg may be administered intravenous push (IVP) over 2-5 minutes, while doses of 50 mg should be pushed over 10 minutes. Alternatively, intravenous piggyback (IVPB) administration is allowed and is an option used at our institution to mitigate the risk of hypotension and other infusion-related adverse effects. The purpose of this project is to evaluate our institutional practice. We hypothesize that variability in institutional practices may predispose patients to hemodynamic changes.

This single-center, retrospective cohort quality improvement study will include adult patients who received IVP or IVPB protamine for UFH or LMWH reversal at our institution between January 1 and November 1, 2025. Patients receiving protamine for cardiopulmonary bypass reversal, with alternative documented causes of hypotension or allergic reaction were excluded. Patients were evaluated for administration method, dose appropriateness, administration rate compliance, and hemodynamic changes within one hour of protamine administration.

The primary outcome is a composite of clinically significant hypotension and/or probable or confirmed anaphylaxis occurring within one hour of protamine initiation. Secondary outcomes include time from verification to administration, compliance with recommended administration rates, and appropriateness of protamine dosing and re-dosing.

The results and conclusions are pending. These future findings will help characterize the safety of real-world protamine administration practices and identify opportunities to improve administration comment adherence, reduce preventable adverse events, and optimize the safety of anticoagulation reversal at our institution.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Guideline-Compliant Empiric Antibiotic Regimens in Emergency Department Patients with Severe Sepsis or Septic Shock

Author: Jamie McGann

Primary Preceptor: Marianne Pop

Institution: University of Illinois at Chicago College of Pharmacy – Rockford Campus

Abstract:

Severe sepsis and septic shock are medical emergencies that require prompt initiation of effective empiric antibiotic therapy. While current quality metrics emphasize timely antibiotic administration, the appropriateness of initial empiric regimens—defined as guideline-compliant, broad-spectrum therapy tailored to suspected infection source and patient-specific risk factors—is equally critical to improving patient outcomes. Inappropriate empiric therapy has been associated with increased mortality, particularly in the setting of rising antimicrobial resistance. Emergency department (ED) clinicians must rapidly balance urgency with antimicrobial stewardship when selecting empiric regimens. This study aims to evaluate the frequency and outcomes of national guideline-compliant empiric antibiotic regimens in ED patients presenting with severe sepsis or septic shock across a multi-hospital system.

This multicenter, retrospective cohort study included adult patients (≥18 years) presenting to the ED at 15 hospitals within our healthcare system between January 1 and September 30, 2025, with International Classification of Diseases, Tenth Revision codes for severe sepsis or septic shock who received intravenous antibiotics. Patients with multiple infection sources (except concurrent urinary tract infection), prior antibiotic administration at an outside facility, or interfacility transfers were excluded. Eligible infections included pneumonia, skin and soft tissue infections, urinary tract infections, and intra-abdominal infections. Empiric antibiotic regimens were assessed for compliance with Infectious Diseases Society of America and Surgical Infection Society guidelines, as well as Centers for Medicare & Medicaid Services SEP-1 recommendations. Patients were stratified by ED pharmacist presence, guideline compliance, and SEP-1 adherence. The primary outcome was the percentage of guideline-discordant empiric regimens. Secondary outcomes

included antibiotic escalation or modification, intensive care unit admission, APACHE-II and SOFA scores, and 30-day mortality. Descriptive and comparative statistics were used to analyze outcomes and identify associations between compliance and clinical endpoints. Data analysis and final results will be presented at ILPRC.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Expansion of the Pharmacist-Led Heart Failure Clinical Services to General Cardiology

Author: Kanwal Merchant

Primary Preceptor: Esha Bhargava

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose: Heart failure affects nearly 6.7 million adults in the United States and remains a leading contributor to morbidity, mortality, and healthcare costs. Guideline-directed medical therapy (GDMT) is recommended for patients with heart failure with reduced ejection fraction and heart failure with preserved ejection fraction to improve survival and reduce hospitalizations. Optimization of GDMT in routine clinical practice remains suboptimal due to barriers including regimen complexity, adverse effects, and adherence challenges. Prior evidence has demonstrated that integrating pharmacists into heart failure clinics improves GDMT optimization, reduces time to achieving optimal therapy, and is associated with improved survival outcomes. Within our organization, the heart failure pharmacist currently supports patients referred by the advanced heart failure team; however, there has been an underutilization of pharmacy services. The purpose of this project is to expand pharmacy services to heart failure patients managed by general cardiology.

Methods: This project is a single-center, quality-improvement initiative and is exempt from Institutional Review Board review. An interdisciplinary presentation describing the current pharmacy clinic services and referral process was delivered to the general cardiology team, with supporting referral materials provided. Following the presentation on November 13th 2025, the clinic began accepting referrals from general cardiology. The primary objective is to expand the pharmacist-led heart failure service, measured by the number of referrals received and resulting patient visits from general cardiology compared with the advanced heart failure team. Secondary objectives include quantifying and categorizing pharmacist interventions for all patients seen in the pharmacy clinic. Data will be analyzed descriptively.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Oncology Compounding Categorization Within a Hospital Based Ambulatory Infusion Pharmacy

Author: Michael Minus

Primary Preceptor: Colton Staudt

Institution: Northwestern Memorial Hospital

Abstract:

Purpose: This project aims to develop a standardized, tiered categorization system for compounded sterile preparations (CSPs) within an ambulatory infusion pharmacy at a large academic medical center. The system will be designed to ensure compliance with USP <797> and <800>, and will incorporate factors such as hazardous classification, preparation complexity, and compounding time and resource intensity. The goal of this study is to inform staffing models, expand technician scope, benchmark efficiency metrics across outpatient infusion centers, and support inter-institutional standardization and quality improvement initiatives.

Methods: This single-center, retrospective quality improvement study will evaluate more than 10,000 prepared and dispensed intravenous CSPs from October 1, 2024, through September 30, 2025. Preparation complexity and time intensity will be assessed through real-time time-motion studies, where applicable. Each CSP will be classified using the newly developed tiered categorization system and analyzed based on components, technician involvement per preparation, preparation time, turnaround time, rework rates, documentation quality, and overall efficiency and resource utilization across infusion centers.

Anticipated Outcomes: The dataset is expected to enable a comprehensive assessment of workload and resource needs in oncology infusion pharmacy operations. Findings will help guide future staffing models as the academic medical center expands its outpatient infusion services.

Potential Implications: This quality improvement study may enhance pharmacy efficiency in the preparation of outpatient CSPs, improve lead time predictability, and reduce patient

chair time. Longer-term, findings may support streamlined workflows, optimized resource allocation, and greater standardization across ambulatory infusion practice sites.

Results and Conclusion: Results will be presented at the Illinois Pharmacy Residency Conference in May 2026.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Ceftazidime-avibactam Plus Aztreonam Versus Cefiderocol for the Treatment of Metallo-Beta-lactamase-Producing Organisms

Author: Natalie Moreno

Primary Preceptor: Jill Argotsinger

Institution: Advocate Lutheran General Hospital

Abstract:

Purpose: Carbapenem-resistant Enterobacterales (CRE) represent a growing public health threat. Recent surveillance data in the United States demonstrate rising incidence of CRE, particularly isolates harboring metallo- β-lactamases (MBLs). Per the 2024 Infectious Diseases Society of America (IDSA) guidance, the current mainstay of therapy for MBL-producing organisms is either cefiderocol or a combination of aztreonam plus ceftazidime-avibactam. Currently, IDSA does not endorse one agent over the other with a lack of data comparing the two regimens. The objective of this study was to compare treatment outcomes between ceftazidime-avibactam plus aztreonam versus cefiderocol for the treatment of MBL-producing organisms.

Methods: This multicenter, retrospective, cohort study evaluated patients from January 2021 to December 2025. Patients were included if they were over the age of 18 years, received either cefiderocol or a combination of aztreonam and ceftazidime-avibactam for the treatment of MBL-producing organisms. Patients were excluded if they received less than 72 hours of therapy or were discharged directly from the emergency department. The primary outcome was to compare clinical success defined as complete resolution of signs and symptoms of infection without the need for additional antibiotics at the end of therapy, no recurrence within 30 days, and absence of all-cause mortality within 30 days. Secondary outcomes include evaluating clinical outcomes stratified by site of infection (sterile vs. non-sterile), all-cause mortality, microbiological eradication, and adverse effects.

Results and Conclusion: Results will be presented at the Illinois Pharmacy Resident Conference in May 2026

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Incidence of Fungal Infection in Autologous Stem Cell Transplant with or without Antifungal Prophylaxis after Discharge

Author: Nishat Mujeeb

Primary Preceptor: Emily Rux

Institution: Loyola University Medical Center

Abstract:

Purpose:

Invasive fungal infections (IFIs) are a serious complication following hematopoietic stem cell transplantation (HSCT), though their incidence is lower in autologous HSCT recipients compared to allogeneic transplants. The first 100 days post-transplant represents a vulnerable period due to transient neutropenia, mucosal barrier injury from myeloablative conditioning regimens, and infectious complications that may contribute to early mortality. Current national guidelines recommend antifungal prophylaxis in autologous HSCT patients when specific risk factors, such as prolonged neutropenia or severe mucositis, are present. However, institutional practices vary, and data evaluating limited versus prolonged antifungal prophylaxis remain scarce.

In May 2024, a large academic medical center revised its guidelines to discontinue routine antifungal prophylaxis beyond engraftment or at hospital discharge for autologous HSCT recipients. The purpose of this study is to evaluate the incidence of fungal infections in autologous HSCT patients at 30 and 100 days post-transplant following this protocol change and to compare outcomes between patients receiving limited versus prolonged antifungal prophylaxis.

Methods:

This retrospective, single-center cohort study includes patients ≥18 years old who underwent autologous HSCT at a large academic medical center between January 1, 2023, and September 1, 2025. Patients were stratified into pre- and post-protocol change cohorts. Individuals with a documented invasive fungal infection within six months prior to transplant were excluded. The primary endpoint was the incidence of fungal infection

within 30 days post-transplant. Secondary endpoints included fungal infection within 100 days post-transplant, duration and resolution of mucositis, time to neutrophil engraftment, 100-day overall survival, causes of mortality, and antifungal-related adverse events. Descriptive statistics will be used for baseline characteristics. Continuous variables will be analyzed using t-tests and categorical variables using chi-square or Fisher's exact tests. Results will be presented at the 2026 Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Influence of Genotype-guided Tacrolimus XR Dosing on Attainment of Therapeutic Troughs after Kidney Transplantation

Author: Lilly Nguyen

Primary Preceptor: Laura Cotiguala

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Title: Influence of Genotype-guided Tacrolimus XR Dosing on Attainment of Therapeutic Troughs after Kidney Transplantation

Author: Lilly Nguyen

Primary Preceptor: Laura Cotiguala

Institution: VA – Hines, IL – Edward Hines, Jr. VA Hospital

Purpose

This study aims to evaluate whether genotype-guided dosing improves early attainment of therapeutic tacrolimus concentrations in CYP3A5 extensive and intermediate metabolizers following kidney transplantation compared to standard fixed dosing. Achieving therapeutic troughs promptly is critical to reducing the risk of acute rejection and donor-specific antibody formation, particularly in the immediate post-transplant period. However, CYP3A5 expressors metabolize tacrolimus more rapidly, leading to lower drug exposure and increased rejection risk, often necessitating higher doses. While previous randomized controlled trials have examined genotype-based dosing strategies with immediate-release tacrolimus, results have been mixed and have not demonstrated improvements in clinical outcomes. Importantly, no studies have assessed this approach with extended-release (XR) tacrolimus, which has distinct pharmacokinetic properties and is increasingly utilized in practice. This study addresses this gap by determining whether genotype-informed dosing of tacrolimus XR optimizes early therapeutic

trough attainment and reduces variability in drug exposure.

Methods

This Institutional Review Board approved single-center retrospective study included chart review of adult kidney transplant recipients from November 1, 2020 to August 30, 2025. Eligible patients were CYP3A5 intermediate or extensive metabolizers initiated on tacrolimus XR post-

transplant. Exclusions included tapering off tacrolimus XR within 30 days, significant CYP3A5 drug interactions within 30 days, or conversion to belatacept within 60 days. The primary outcome was time (days) to achieve a therapeutic tacrolimus trough (≥8 ng/mL). Secondary outcomes included the proportion of patients achieving therapeutic trough by days 7, 10, and 14, trough and dose trends at specified intervals, coefficient of variation at 30 and 60 days, proportion of patients with supratherapeutic trough ≥14 ng/mL within 14 and 30 days, delayed graft function, eGFR at 30, 60, and 90 days, graft and patient survival, biopsy-proven rejection, and donor-specific antibodies at 90 days.

Results/Conclusions

Ongoing. To be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Antimicrobial Prophylaxis and Infection in Veno-arterial Extracorporeal Membrane Oxygenation

Author: Valeria Noriega

Primary Preceptor: Andrew Jatis

Institution: Northwestern Memorial Hospital

Abstract:

Purpose: A potential complication of veno-arterial extracorporeal membrane oxygenation (VA-ECMO) is infection, occurring in up to 20% of patients. Despite high rates of infection in ECMO patients, the Extracorporeal Life Support Organization (ELSO) General Guidelines in 2017 and ID task force statement in 2012 do not recommend additional prophylaxis outside standard periprocedural antimicrobials, with the exception of patients with central transthoracic cannulation through an open chest who are inherently at high risk for mediastinitis. The mismatch between infection risk and prophylaxis guidance has led to a large variation in real-world practice without a clear consensus. A single-center study has shown protocolized antimicrobial prophylaxis after cannulation reduced broad-spectrum antimicrobial use without an effect on patient-centered outcomes. In 2024, our center introduced an updated clinical protocol that addresses this issue. This study aims to compare infection rates and antimicrobial use before and after protocol adoption to evaluate its impact on broad-spectrum antibiotic utilization and infection incidence.

Methods: This retrospective, pre-post guideline implementation analysis will be completed at a single-center, 894-bed acute, tertiary academic medical center. Adult patients who required VA-ECMO support primarily for a cardiovascular indication for ≥ 24 hours were included. Patients were excluded if they had an active infection at the time of cannulation, had been cannulated for > 48 hours at an outside hospital prior to transfer, were initially cannulated for veno-venous (VV) ECMO prior to conversion to VA-ECMO, or belonged to a protected population (pregnant patients, prisoners). The primary endpoint of this study will be the incidence of infection. The secondary endpoints included prevalence of infection, median duration of antimicrobial prophylaxis, percentage of broad-spectrum prophylaxis

used, discharge location, length-of-stay, ECMO days, mechanical ventilation days, and mortality.

Results and Conclusions: Results will be presented at the Illinois Pharmacy Resident Conference in May 2026.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Optimizing Vancomycin Therapy in Elderly Hospitalized Patients: A Review of Standard Dosing Practices

Author: Lauren O'Connor

Primary Preceptor: Kevin Bajer

Institution: Palos Community Hospital (Northwestern Medicine)

Abstract:

Vancomycin is one of the most frequently utilized antibiotics for gram-positive infections, including infections caused by Methicillin-Resistant Staphylococcus aureus, but it carries a risk of nephrotoxicity which can lead to acute kidney injury (AKI), particularly in elderly patients. Age-related physiological changes such as reduced renal function, lower muscle mass, and protein-binding alterations may impact vancomycin pharmacokinetics and pharmacodynamics. Traditional dosing protocols based on total body weight, renal clearance, and area under the curve (AUC) measurements may inadequately account for these differences and not be optimized in the elderly population (patients 65 and older). Therefore, this study aims to evaluate the current vancomycin dosing protocol at a community based hospital, and the rate of target AUC attainment in elderly patients. This retrospective data review will include approximately 200 patients admitted from September 30th, 2024, to September 30th, 2025, who received intravenous vancomycin therapy for a suspected or culture-confirmed infection for at least 72 hours. The primary outcome will be the proportion of patients 65 years and older who achieve a target vancomycin AUC level based on initial steady-state drug concentrations as defined by the current institutional dosing protocol. Secondary outcomes will evaluate adherence to the standard dosing protocol, incidence of acute kidney injury, AUC attainment in certain BMI categories, and length of hospital stay. It is hypothesized that dosing vancomycin using the institutional protocol results in higher AUC levels, and potentially an increased risk of adverse events in the elderly population. The results of this study will assess both therapeutic outcomes, and the safety of the standard dosing protocol of intravenous vancomycin initiation in patients over 65 years of age and identify potential opportunities to optimize clinical practices.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Barriers to Guideline-Directed Medical Therapy Initiation and Titration in Heart Failure with Reduced Ejection Fraction: A Transitional Care Clinic Perspective

Author: Raquel Ortiz-Merced

Primary Preceptor: Asish Biju

Institution: University of Illinois at Chicago College of Pharmacy – Rockford Campus

Abstract:

Purpose:

Guideline-directed medical therapy (GDMT) has been shown to improve morbidity and mortality in patients with heart failure with reduced ejection fraction (HFrEF); however, real-world implementation frequently remains suboptimal. Transitional Care Clinics (TCCs) are well positioned to optimize GDMT initiation and titration during high-risk post-discharge periods. The purpose of this study is to evaluate barriers that limit the initiation and titration of GDMT in patients with HFrEF managed in a TCC. Additionally, the study aims to characterize trends in GDMT initiation and dose titration, including the proportion of patients who achieve target or maximally tolerated doses by the end of their TCC episode.

Methods:

This retrospective chart review included adult patients with HFrEF who received care in a health-system TCC between August 1, 2024, and August 30, 2025. Patients were identified through electronic health record (EHR) queries. Data collected included demographics, comorbidities, baseline and follow-up GDMT prescribing patterns, dose titration frequency, time to medication adjustments, and documented clinical or system-level barriers to optimization.

Results:

The final sample included 76 patients who completed an initial TCC visit during the study period. The mean age was 70.75 ± 13.65 years; 36.8% were female and 63.2% were male. At the initial TCC visit, 71 patients (93.4%) were receiving at least one GDMT agent. Beta-blockers were the most commonly prescribed class (92.9%), followed by sodium-glucose

cotransporter-2 inhibitors (50.7%). Preliminary review suggests variability in titration practices and documentation of barriers. Complete analyses of titration outcomes, target dose attainment, and identified barriers will be presented at the meeting.

Conclusions:

Understanding barriers to GDMT optimization within a TCC setting may inform targeted interventions to improve implementation of evidence-based therapy in patients with HFrEF. Full study findings will be presented at the meeting.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Oral Fosfomycin for Extended Spectrum Beta-Lactamases Urinary Tract Infections Managed in the Emergency Department: Dosing Duration, and Outcomes Compared with Standards of Care

Author: Erica Osei-Badu

Primary Preceptor: Manar Kandil

Institution: OSF Saint Anthony Medical Center

Abstract:

Purpose:

Urinary tract infections (UTIs) caused by extended-spectrum β-lactamase (ESBL)–producing organisms present a significant treatment challenge, particularly in the emergency department (ED), where timely antibiotic selection is critical. Among patients stable enough for discharge, oral treatment options remain limited. Fosfomycin, although approved for uncomplicated cystitis, demonstrates favorable in vitro activity against ESBL uropathogens and represents a potential oral alternative. This study aims to evaluate the impact of single-dose versus multidose fosfomycin regimens compared with standard-of-care (SOC) antibiotics on clinical outcomes in patients presenting the ED with ESBL-positive UTIs.

Methods:

This retrospective, multicenter cohort study was conducted across four Illinois community hospitals between August 1, 2020, and August 1, 2025. Adult patients were included if they presented to the ED with ESBL-positive urine cultures confirmed by the VITEK 2 system and received either oral fosfomycin or SOC antibiotics in the ED, at discharge, or through a follow-up prescription. Exclusion criteria included pregnancy, prostatitis, non-UTI infections requiring systemic antibiotics, and sepsis or septic shock. The experimental group included patients receiving fosfomycin as a single 3-g oral dose or multidose regimens administered every 24, 48, or 72 hours. The control group consisted of SOC therapies, including nitrofurantoin, trimethoprim-sulfamethoxazole, fluoroquinolones,

aminoglycosides, and carbapenems. A subgroup analysis compared single versus multidose fosfomycin regimens.

The primary outcome was a composite measure of 30-day treatment failure, defined as return visits for persistent or worsening symptoms, antibiotic modification, or repeat positive cultures with ongoing symptoms. Secondary outcomes included adverse drug events, total treatment duration, hospital length of stay, and time to follow-up after culture results. A noninferiority margin of 0.10 and a required sample size of 284 participants were calculated. Statistical analyses will include chi-square or Fisher's exact tests for categorical variables and t-tests or Mann-Whitney U tests for continuous variables. Results will be presented at ILPRC.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: System Standardization of Medication Kits Across a Large Multistate Health Enterprise

Author: Itzanami Osorio

Primary Preceptor: Jennifer Locker

Institution: Advocate Lutheran General Hospital

Abstract:

Statement of Purpose:

Medication kits support rapid, efficient, and safe patient care; however, significant variation in kit composition and limited oversight can introduce safety risks. While our enterprise has standardized select kits, no comprehensive enterprise inventory exists. Standardized kit management is essential for improving safety, operational efficiency, and alignment across multisite health systems. The purpose of my project is to develop a comprehensive, enterprise-wide master inventory of physical and electronic medication kits to support future standardization efforts across the enterprise.

Methods:

This project includes all inpatient sites in the Midwest and Southeast regions under the enterprise. Kit data—including kit names, medication contents, medication quantities, and kit quantities—are collected from various resources. Individual site-level master kit lists are constructed in spreadsheet format, then verified by designated site contacts. Missing or unclear data are clarified directly with site representatives. Verified lists will be consolidated into an enterprise-level master inventory, formatted using best practices in medication safety, including tall-man lettering and high-alert medication differentiation. Stakeholders across the enterprise will review the final draft prior to recommendations for systemwide application.

Results:

Data collection and site-level list development are ongoing. Preliminary findings indicate substantial variability in kit naming, content, and structure across sites, reinforcing the

need for enterprise alignment. Early stakeholder engagement has demonstrated strong interest in systemwide standardization and improved visibility into kit utilization. Long-term maintenance of the master list will be essential for ensuring accuracy and supporting ongoing organizational standardization initiatives.

Conclusions:

Creation of an enterprise-wide master inventory of medication kits will support future standardization efforts, enhance patient safety, and promote operational consistency across the enterprise. The resulting database will serve as a foundational tool for enterprise decision-making and future governance processes.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Enhancing the Provider Prescribing Experience

Author: Kyle Palmer

Primary Preceptor: Lynn Boecler

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Background/Purpose

Computerized Provider Order Entry (CPOE) and Clinical Decision Support (CDS) tools are integral to safe medication prescribing. Organizations that conduct accreditation surveys the use of CDS within CPOE as this reduces medication errors. To prevent alert fatigue and provider burnout, CDS must be meaningful and actionable. Utilizing the "Five Rights" of CDS, specifically prioritizing the delivery of the right information at the right time in the workflow to the right person. This project transitioned from end-of-order alerts to "inline" dose warnings, and providers receive critical alerts immediately upon order entry. Additionally, interaction settings were recalibrated for outpatient prescribing. With these changes, we are expecting to see a decrease in medication dose warning overrides.

Methods

This quality improvement project is exempt from Institutional Review Board approval. Preparation for Inline dose warnings required an audit and conversion of approximately 450 medication records from embedded maximum doses to rule-based logic. Dosing rules were provided by a medication data vendor and supplemented by custom rules designed to align better with the organization. During the adjustment period, vendor-provided rules were evaluated to determine if they met clinical requirements, minimizing the need for custom builds. Simultaneously, interaction settings were curated specifically for outpatient providers to deliver higher-utility alerts. This involved updating dose warnings and drug-disease interaction settings to filter out inpatient-centric "noise." This transition ensures that the CDS system provides the right information for the right person, reducing irrelevant interruptions and focusing the provider’s attention on high-priority clinical safety data. Medication dose warning data will be extracted prior to this enhancement and monitored

for 3 months following implementation. The data will then be used to see if this implementation caused a decrease in dose warning overrides.

Results: In process

Conclusion: In process

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Unfractionated Heparin Continuous Infusion in Elderly Patients

Author: Bijal Patel

Primary Preceptor: Julie Baldaserra

Institution: Rush University Medical Center

Abstract:

Unfractionated heparin (UFH) is commonly used for therapeutic anticoagulation in hospitalized elderly patients but is associated with an increased risk of bleeding due to age-related pharmacokinetic and pharmacodynamic changes. Monitoring UFH using anti-Xa levels is preferred at Rush University Medical Center (RUMC) due to faster achievement of therapeutic anticoagulation and fewer dose adjustments compared to activated partial thromboplastin time (aPTT). Despite this advantage, prior studies suggest elderly patients may have increased sensitivity to UFH, potentially leading to supratherapeutic anticoagulation. The purpose of this study was to evaluate whether elderly patients receiving an initial UFH bolus are more likely to have supratherapeutic initial anti-Xa levels compared to those who do not receive a bolus, and to assess associated bleeding outcomes.

This single-center retrospective cohort study included hospitalized patients aged ≥65 years who received therapeutic UFH at RUMC between April 1, 2025 and October 30, 2025. Patients were grouped based on receipt of an initial UFH bolus prior to continuous infusion. Exclusion criteria included baseline hemoglobin <7 g/dL, platelet count $<50 \times 10^9$/L, receipt of a direct oral anticoagulant (DOAC) or therapeutic low molecular weight heparin (LMWH) within 72 hours prior to UFH initiation, UFH use not consistent with institutional protocol, or conversion to anti-Xa monitoring following aPTT monitoring. Data collected included patient demographics, high-risk comorbidities, concomitant bleeding-risk medications, UFH indication, bolus dosing, infusion rate at initiation, baseline laboratory values, and anti-Xa levels. The primary outcome was the first anti-Xa level following UFH initiation, categorized as subtherapeutic, therapeutic (0.3-0.7 IU/mL), or supratherapeutic. The

secondary outcome was incidence of major bleeding as defined by International Society on Thrombosis and Haemostasis (ISTH) criteria.

Data analysis is ongoing. Pending final analysis, results may inform optimization of UFH bolus dosing strategies to reduce supratherapeutic anticoagulation and bleeding risk in elderly patients monitored with anti-Xa levels.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Empagliflozin for Diuresis in Heart Failure Patients

Author: Krupa Patel

Primary Preceptor: Lyuba Dragilev

Institution: VA - North Chicago, IL - Captain James A. Lovell Federal Health Care Center

Abstract:

Purpose: Empagliflozin 10 mg daily is the Food and Drug Agency (FDA) approved dose for heart failure. Providers at Captain James A. Lovell

Federal Health Care Center (FHCC) are noted to increase the dose to 25 mg for additional diuresis. However, there is minimal data to support this practice. The objective is to assess the changes in loop diuretic requirements and hospitalization rates once the empagliflozin dose was increased to 25 mg compared to veterans who have remained on the lower dose of 10 mg or 12.5 mg. Evaluating the impact of current practices will add to the existing body of evidence.

Methods: This is a retrospective cohort quality assurance/quality improvement project analyzing the changes in loop diuretic requirements, hospitalizations, and adverse reactions reported within a one-year period after patients with heart failure have been increased to empagliflozin 25 mg compared to those at lower doses (10 mg or 12.5 mg). Data will be collected by reviewing consecutive patients on the National Academic Detailing Services' Heart Failure Patient Report. A total of 250 patient charts will be reviewed. Eligible patients include veterans at least 18 years of age with a heart failure diagnosis, who are following up with cardiology service at FHCC, and are on empagliflozin in addition to a loop diuretic. The primary outcome of this study is the percentage of patients that had a reduction in their loop diuretic dose at the one-year mark from when the low or high dose empagliflozin was initiated. Secondary outcomes include the percentage of patients that were admitted to the hospital for heart failure exacerbation during that one-year follow up period and the percentage of patients that experienced genital mycotic infections, urinary tract infections, and/or hypotension during the study period.

Results: Not yet available, research-in-progress.

Conclusion: Not yet available, research-in-progress.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Plerixafor Utilization in Patients at High Risk for Poor Stem Cell Mobilization Undergoing ASCT

Author: Richa Patel

Primary Preceptor: Randall Knoebel

Institution: University of Chicago Medicine

Abstract:

Background

The introduction of newer mobilization agents, including motixafortide and plerixafor, has expanded stem cell mobilization strategies for newly diagnosed multiple myeloma patients undergoing autologous stem cell transplantation (ASCT). This study aimed to evaluate the effectiveness of standard mobilization regimens in patients considered high risk for poor mobilization and who would have met institutional eligibility criteria for motixafortide.

Methods

Patients 18 years and older with diagnosed MM that were undergoing stem cell mobilization for ASCT after initial induction therapy were included in this single-center, retrospective analysis. All patients received standard mobilization regimens. Patients eligible to receive motixafortide were evaluated based on risk criteria for poor mobilization. The primary endpoint was comparison of successful collection, defined as 8 million or greater CD34+ cell count, between patients eligible to receive motixafortide, but received standard mobilization and those who were not eligible.

Results

A total of 95 patients underwent stem cell mobilization with either plerixafor + G-CSF or G-CSF alone. Sixty-five patients (68%) had ≥1 risk factor for poor mobilization and would have met eligibility criteria for motixafortide (high-risk group). Among the high-risk group, patients who received standard mobilization instead, 66% achieved successful collection, compared with 70% in patients with standard-risk ($p = 0.816$).

Secondary analyses evaluated individual risk subgroups. Patients 65 years of age or older had a 66% collection success rate ($p = 1.00$). Those who received daratumumab during induction had a 64.8% success rate ($p = 0.378$), and patients with prior radiotherapy had a 60% success rate ($p = 0.724$).

Conclusion

In our institution, among high-risk patients who received an alternative mobilization regimen had no statistically significant differences in mobilization outcomes compared with patients who were not eligible for motixafortide. These findings indicate no measurable disadvantage to standard mobilization in patients traditionally considered high-risk.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Efficacy and Cost Analysis of Adding Plerixafor to A Peripheral Blood Stem Cell Mobilization Protocol for Autologous Hematopoietic Stem Cell Transplant in Patients with Multiple Myeloma

Author: My Patterson

Primary Preceptor: Sanja Zepcan

Institution: Loyola University Medical Center

Abstract:

Purpose: Autologous hematopoietic stem cell transplant (HSCT) is a key therapeutic strategy for patients with multiple myeloma, with successful transplantation dependent on adequate peripheral blood stem cell mobilization. Plerixafor, a C-X-C motif chemokine receptor 4 inhibitor, when added to granulocyte colony-stimulating factor (G-CSF), has been shown to improve CD34+ cell yield; however, its historically high cost, despite the recent availability of generic formulation, and the need for optimal patient selection remain areas of ongoing evaluation. In 2024, we revised our autologous stem cell collection protocol to routinely include plerixafor for all patients. This study aims to assess the efficacy, safety, and cost impact of adding plerixafor to a G-CSF based mobilization strategy and to identify risk factors associated with poor mobilization at our institution, an academic center.

Methods: This single center, retrospective chart review includes adult patients with multiple myeloma who underwent autologous HSCT mobilization with either G-CSF alone or G-CSF plus plerixafor between August 2001 and June 2025. The primary endpoint is the number of days required for stem cell collection. Secondary endpoints include CD34+ cell yield, mobilization success rate, adverse effects, cost effectiveness, and identification of risk factors for poor mobilization. Baseline characteristics will be summarized using descriptive statistics. Comparisons between groups will be performed using appropriate categorical and continuous statistical tests, and logistic regression will be used to identify independent predictors of poor mobilization.

Results: Data collection and analysis are ongoing.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Risk Factors for Drug-Resistant Pathogens in Community-Acquired Pneumonia: A Retrospective Evaluation of Predictors, Empiric Antibiotic Use, and Stewardship Opportunities

Author: Aleksandar Pejnovic

Primary Preceptor: Sergio Villicana

Institution: Franciscan Health Dyer Franciscan Health Dyer

Abstract:

Purpose

Community-acquired pneumonia (CAP) is a leading cause of hospitalization. Empiric antibiotic selection requires balancing the risk of undertreating drug-resistant pathogens (DRPs), such as methicillin-resistant Staphylococcus aureus (MRSA) and Pseudomonas aeruginosa, against the harms of unnecessary broad-spectrum therapy. The 2019 ATS/IDSA guideline eliminated the health care associated pneumonia (HCAP) category and emphasized individualized, locally validated risk assessment. Prior studies have shown history of DRP infections and recent antibiotic exposure as the strongest predictors of drug-resistant pathogens. This study aims to identify risk factors for DRPs in hospitalized CAP patients at two small community hospitals and evaluate the impact of empiric choices on clinical outcomes.

Methods

This study is a multicenter, retrospective cohort study of adult patients admitted with CAP between September 2022 – September 2025. Inclusion criteria were age ≥18 years, admission diagnosis of CAP, and availability of culture data.

The primary outcome will be the identification of risk factors associated with the isolation of drug-resistant pathogens including MRSA or Pseudomonas aeruginosa. Secondary outcomes will include the proportion of patients treated with antibiotic therapies and the outcomes in those treatment groups. Data collected will include demographics, comorbidities, prior DRP infection or colonization, recent antibiotic exposure within 60 days, recent hospitalization within 90 days, 30-day readmission rates, nursing-home residence, chronic lung disease, tracheostomy, wound care, and functional status. In addition, microbiologic results, antibiotic regimens, and all other data will be gathered from the electronic health record. Institutional review board approval was obtained at all participating centers.

Results (pending)

Conclusion (pending)

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Clinical and Pharmacoeconomic Profiles of Heparin Infusion and Enoxaparin: A Comparative Observational Study

Author: Lindsey Pham

Primary Preceptor: Howard Wang

Institution: Franciscan Health Dyer Franciscan Health Dyer

Abstract:

Purpose:

The purpose of this comparative observational retrospective study is to compare patient safety and pharmacoeconomic outcomes of unfractionated heparin infusion versus subcutaneous enoxaparin for therapeutic anticoagulation in hospitalized adults. By measuring patient safety outcomes and pharmacoeconomic outcomes, this study will provide information to guide institutional policies and future research.

Methods:

For this study, participants will be identified by electronic health records at Franciscan Hospital Dyer. Inclusion criteria for this study include patients 18 years or older, have a diagnosis such as venous thromboembolism, acute coronary syndrome, or atrial fibrillation, started anticoagulation therapy between July 2024 and August 2025, and must have received either heparin infusion or subcutaneous enoxaparin for a minimum of 24 continuous hours.

The exclusion criteria include end-stage renal disease with or without hemodialysis, heparin infusion for procedures except for ACS related procedures, heparin allergy, or pregnancy. Data will be obtained from the electronic health records, pharmacy dispensing

systems, infusion pump utilization logs, laboratory data, and the institutional incident reporting platform. The primary endpoint will include adverse events and medication errors related to anticoagulation therapy. Secondary endpoints will include medication cost, frequency of laboratory testing, length of stay, and frequency of nursing interventions.

Results:

Pending

Conclusion:

Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Statins on Gastrointestinal Bleeding in Left Ventricular Assist Device Patients

Author: Ivan Porto

Primary Preceptor: Pamela Simone

Institution: University of Chicago Medicine

Abstract:

Background: Left ventricular assist devices (LVADs) have improved survival in advanced heart failure, with newer models achieving one-year survival rates exceeding 80%. Despite these advances, gastrointestinal bleeding (GIB) remains a frequent complication. Statins are commonly prescribed in this population, but their effects on bleeding risk have been reported with mixed results. We aim to evaluate the association between statin therapy and GIB in LVAD recipients.

Methods: This retrospective cohort study includes patients implanted with an LVAD between November 2017 and July 2024. Patients are categorized into statin groups by statin strength. The primary outcome is the incidence of GIB within 1 year of LVAD implantation. Secondary outcomes include incidence of GIB based on statin intensity, incidence of confirmed arteriovenous malformation, and hospital length of stay due to GIB. Statistical analyses with chi-squared tests were used to compare categorical variables between statin and non-statin groups. Analyses of continuous variables will utilize t-tests.

Results: 132 patients were included, of whom 16 (12.1%) experienced a GIB event. Patients with GIB were significantly older than those without bleeding. Statin use and intensity were not associated with GIB occurrence. Among patients with GIB, patients taking statins had a significantly shorter number of days to bleeding occurrence. No significant differences were observed in bleeding-related outcomes by statin use or intensity.

Conclusion: In this cohort, there was a 12.1% GIB rate. Statin use and intensity were not associated with the occurrence of GIB or bleeding severity. Among patients who experienced GIB, statin-eligible patients had a shorter interval from LVAD implantation to bleeding. This did not translate into any difference in clinical bleeding outcomes. Overall,

these findings suggest that statin therapy and statin intensity were not associated with any change in bleeding risk or severity.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Accelerated Contrast Allergy Premedication Regimens Compared to a Traditional Protocol

Author: Parker Quinlan

Primary Preceptor: Bryan Menich

Institution: Rush University Medical Center

Abstract:

Title: Evaluation of Accelerated Contrast Allergy Premedication Regimens Compared to a Traditional Protocol

Authors: Parker Quinlan, PharmD; Bryan Menich, PharmD, BCCCP; Mary Clay, PharmD, BCPS; Alissa Shega, PharmD, BCCP

Background:

The use of contrast media in radiologic imaging is a useful and often necessary tool in the diagnosis of many illnesses and injuries. Less than 1% of patients exposed to contrast media have an allergic-like reaction. For patients that require re-exposure to contrast media, there are premedication protocols that help reduce the likelihood of reaction to contrast. Current guidelines from the American College of Radiology share 13-hour, 12-hour, 5-hour, and 1-hour protocols. The 13-hour protocol has been the long-standing standard of care, however, there is limited but growing evidence comparing accelerated protocols to traditional regimens. The objective of this study is to compare breakthrough reaction rates between patients that receive the standard 13-hour premedication protocol to those that receive accelerated regimens due to the need for emergent imaging.

Methods:

This was an IRB-approved, single-center, retrospective, observational cohort study. Patients were included if they had a documented history of contrast allergy and underwent

contrast-enhanced imaging after receiving premedication. Patients were excluded if they were less than 18 years old, did not receive any corticosteroids for premedication, or if they received corticosteroids for other indications at doses equal to or greater than what is used for premedication. The study groups were split into patients that received premedication through a 13-hour order module and patients that received premedication outside of the order module. The primary outcome was breakthrough reaction rate and secondary outcomes included: length of stay, time to imaging after initiating premedication, severity of breakthrough reaction (if present), and post-steroid hyperglycemia. Chi-squared, Fisher's Exact test, Student's t-test, and Mann-Whitney U Test, as appropriate, were used to assess the primary and secondary outcomes.

Results/Conclusion:

Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Gabapentinoids Use and Risk of COPD Exacerbations in Veterans

Author: Johnsean Ramos Torres

Primary Preceptor: Zane Elfessi

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose: The purpose of this quality improvement (QI) project is to evaluate if there is a relationship between increased risk of acute exacerbations of COPD (AECOPD) in veterans while taking gabapentinoids.

Methods: The electronic health records of patients with physician-diagnosed COPD exacerbations between June 1, 2022 and December 31, 2025, at a VA Medical Center in Chicago, Illinois were reviewed. Demographics, treatment with gabapentin, ED visits, and hospitalizations for COPD exacerbation were abstracted in each case. Data are presented as means±SD and analyzed using Student's t- and Chi-squared tests where appropriate. $P<0.05$ was considered statistically significant. The study was designated 'not research' by my VA Medical Center Institutional Review Board.

Results: A total of 1,209 patients with COPD were identified, of which 378 (29%) were prescribed gabapentin. Fifty-eight patients (15.3%) in the gabapentin group (group 1) had at least one severe COPD exacerbation compared to 92 out of 831 (11.1%) patients not treated with gabapentin (group 2) ($p = 0.037$). Patient demographics were similar in both groups. A significantly higher number of patients in group 1 had ED visits and hospitalization for COPD exacerbation compared to group 2 (59% versus 33%; $p=0.002$ and 3±4 versus 2±2; $p = 0.004$, respectively). In addition, hospital length of stay in group 1 (13±19 days) and total cost ($4,672,826.31) were significantly longer and higher than those in group 2 (5±6 days and $2,613,855.53).

Conclusion: Treatment of patients with COPD with gabapentin at our institution was associated with a significant increase in severe COPD exacerbations and, once hospitalized, in length of stay. A larger, prospective, multi-site study is warranted to support or refute these single site retrospective observations.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Characterizing the Use of Buprenorphine in Palliative Care

Author: Rebekka Rantanen

Primary Preceptor: Kevin Bacigalupo

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Purpose: The purpose of this quality assurance project is to evaluate institution-specific buprenorphine prescribing patterns among palliative care clinic providers. By identifying prescribing trends, the findings may help inform internal dosing strategies and serve as a reference for other hospitals. This assessment may additionally offer insights into how buprenorphine is utilized in palliative care settings to support more consistent and streamlined prescribing practices.

Methods: 72 unique patients will be reviewed for this quality assurance analysis. Retrospective chart review will be completed for all institution-specific patients who were prescribed buprenorphine by a palliative care provider from 06/30/2023 to 07/01/2025.

Baseline characteristics reviewed include age, sex, and race/ethnicity, reason for palliative care referral, and whether the diagnosis included neoplasm-related pain. Opioid status prior to buprenorphine initiation was assessed (opioid naïve vs. non-naïve), with prior opioid use within 30 days documented, if applicable. It was also documented whether an as-needed full agonist opioid was concomitantly prescribed, including details of which opioid was prescribed.

Buprenorphine-specific data included the dosage form prescribed (patch or film), starting dose, most recent refill dose, and number of dose changes during the review period. Additionally, whether buprenorphine was initiated in the inpatient or outpatient setting was recorded, along with whether the recommendation to initiate buprenorphine was made by palliative care. If buprenorphine was discontinued for a reason other than patient death, the reason and date of discontinuation will be noted to calculate the time interval between buprenorphine initiation and discontinuation. Additional data points, if applicable, include

the date of hospice enrollment, date of death, and calculated intervals from buprenorphine initiation to hospice enrollment and death.

Results/Conclusions: Ongoing. To be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Standardizing an EMR-Integrated Heparin Calculator Across a Multiregional Health System

Author: Thomas Riedl

Primary Preceptor: Rebecca Kiliany

Institution: Advocate-Aurora Health Enterprise Advocate-Aurora Health Enterprise

Abstract:

Purpose: Heparin carries a high risk of adverse events, requiring consistent monitoring with either anti Xa or aPTT values and use of standardized dosing nomograms. Within this multi-regional health system, both regions use an electronic medical record (EMR) integrated heparin calculator to assist with nursing driven titrations within each heparin protocol. However, nursing workflows and calculator functionality differ significantly in each region. These foundational differences create operational and safety considerations when aligning to a single enterprise protocol. The purpose of this quality improvement project is to support pharmacy enterprise leadership in implementing a standardized heparin calculator that harmonizes protocols across both regions and promotes health equity and patient safety.

Methods: This project will begin with an assessment of current heparin protocols to identify key practice differences requiring alignment. Next, each region's heparin calculator will be evaluated to outline platform-specific benefits, limitations, and workflow impacts. These findings, along with relevant safety data, will be presented to stakeholders to guide selection of a unified calculator platform. Once a platform is chosen, a framework will be built within the EMR to prepare for final protocol alignment decisions. After protocol decisions are finalized, the heparin calculator will be built within both regions' EMR to support the enterprise heparin protocol. Educational materials will then be developed and distributed to support end user training prior to implementation.

Results: Results pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Incidence of Adverse Effects of Sodium-Glucose Cotransporter-2 Inhibitor (SGLT2i) Use in Heart Failure Patients with Poorly Controlled Diabetes Mellitus

Author: Samantha Ritter

Primary Preceptor: JinJoo Chung

Institution: Loyola University Medical Center

Abstract:

Purpose: The expanded indications for SGLT2i's have contributed to their widespread use over the past decade in heart failure (HF), type 2 diabetes mellitus (T2DM), and chronic kidney disease (CKD). Based on safety results from landmark clinical trials like DAPA-HF and EMPEROR-Reduced, the likelihood of a patient starting an SGLT2i and experiencing an adverse effect (AE) was overall minimal and similar to placebo. These trials do not, however, fully represent patients seen in clinical practice with higher risk characteristics, such as poorly controlled diabetes. Current research lacks AE risk stratification in patients with HF according to A1c or have entirely excluded patients with higher end A1c's. Uncontrolled T2DM is an important risk factor that may predispose individuals on SGLT2i's to experience AEs such as diabetic ketoacidosis and genitourinary (GU) infections due to higher insulin deficiency/resistance and greater levels of glycosuria. Due to this perceived high risk, some physicians include very high A1c (≥10%) as a contraindication to SGLT2i therapy.

Methods: This is a retrospective, single-center cohort study of patients with HF and T2DM at an academic medical center who were started on an SGLT2i between September 1, 2022 – May 1, 2025. The primary outcome is the incidence of diabetic ketoacidosis and GU infections within 6 months of SGLT2i initiation in individuals with HF and T2DM and an A1c of ≥ 10% vs < 10%. Secondary outcomes include risk factors that may further predispose individuals to AEs, rate of SGLT2i discontinuation, incidence of AEs requiring hospitalization and change in SCr from baseline to 6 months. The estimated sample size is 100 patients. RedCap software will be used to securely organize collected data after generating a patient list from SlicerDicer.

Results/Conclusion: The full results of this study will be presented after completion of data collection and analysis

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Optimizing Pharmacogenomics: Evaluating the Effectiveness of Pharmacist-Led Group Classes

Author: Kara Robeson

Primary Preceptor: Annette Kossifologos

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Optimizing Pharmacogenomics: Evaluating the Effectiveness of Pharmacist-Led Group Classes

Purpose:

The purpose of this study is to show the impact of monthly PGx teaching classes in a hybrid inpatient/outpatient mental health unit, to increase PGx testing within the Veterans Affairs (VA) system. This quality improvement project will assess the frequency of consent and testing after Veterans attended a class.

Methods:

A retrospective quality improvement project was conducted between April 1, 2025 to Nov 1, 2025. Patients admitted to the Substance Abuse Residential Rehabilitation Treatment Program (SARRTP) were required to attend one of the monthly education classes led by the Pharmacogenomics (PGx) Clinical Pharmacist Practitioner. The class reviewed the potential risks versus clinical utility of PGx testing, as well as what to expect during and after panel-based testing. Veterans interested in PGx testing were able to provide verbal consent and have PGx testing ordered after the class concluded. The primary endpoint was frequency of consent to test. Other endpoints included frequency of PGx lab draw after consent, number of medications prescribed at baseline that were included on the PGx panel, number of PGx- guided medication adjustments within 6 months of completing PGx panel test, and number of new PGx medications prescribed within 6 months of completing PGx panel test. Baseline prevalence of diagnoses with known pharmacogenomic implications were also recorded. Pharmacy interventions were defined as medication changes or recommendations based on actionable PGx results, in accordance with the

Clinical Pharmacogenetics Implementation Consortium (CPIC) and FDA guidelines as implemented in the VA. Interventions were tracked using a data collection tool, and descriptive statistics were used to summarize all outcomes and evaluate the benefit of pharmacist-led group teaching for PGx.

Results/Conclusions:

Ongoing. To be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Breaking the Cycle: Droperidol and Haloperidol Dosing in Cannabis Hyperemesis Syndrome

Author: Hataitaya Rohan

Primary Preceptor: Neal Lyons

Institution: Loyola University Medical Center

Abstract:

Cannabis hyperemesis syndrome (CHS) is characterized by recurrent severe nausea, vomiting, and abdominal pain in the setting of chronic cannabis use. The proposed pathophysiology involves chronic overstimulation of cannabinoid-1 (CB1) receptors by delta-9-tetrahydrocannabinol (THC), a partial CB1 agonist, leading to paradoxical dysregulation of emesis control pathways and delayed gastrointestinal motility. Due to its lipophilic properties and long half-life, THC may accumulate with chronic use resulting in CB1 receptor downregulation and persistent symptoms.

Standard antiemetic therapies, including ondansetron and metoclopramide, frequently provide limited symptom relief in patients with CHS. As a result, management strategies have shifted toward supportive care including intravenous fluids, topical capsaicin, benzodiazepines, and serotonin antagonists. Dopamine-2 receptor antagonists, such as haloperidol and droperidol, have emerged as potential therapeutic options with proposed efficacy related to receptor crosstalk between dopaminergic and cannabinoid signaling pathways.

Haloperidol has been used extensively as an antiemetic in perioperative and oncology settings, with emerging evidence suggesting benefits in CHS through symptom reduction and decreased need for rescue antiemetics. The reintroduction of droperidol to the market demonstrated recent prospective studies suggesting a reduction in nausea and vomiting and decreased emergency department revisits.

Despite increasing use of dopamine antagonists in CHS, optimal dosing strategies remain undefined, and no direct evaluation of haloperidol and droperidol currently exists. The aim of this study is to evaluate the lowest effective doses of droperidol and haloperidol for

symptom resolution in patients presenting with CHS. This retrospective analysis included adult patients who received droperidol or haloperidol for treatment in the emergency department setting at an academic medical center. Patients treated between August 2023 and August 2025 were eligible for inclusion. Data collected included droperidol and haloperidol doses administered, emergency department length of stay, number of antiemetic doses administered, and use of rescue medications.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: An Evaluation of Extravasation Following Implementation of a New NORepinephrine Concentration in Patients Admitted for Shock

Author: Isabella Rotondi

Primary Preceptor: Jill Starykowicz

Institution: Advocate Lutheran General Hospital

Abstract:

Background: Traditionally, vasopressors are administered via central venous catheters (CVC) due to the concern for extravasation when delivered through peripheral intravenous lines (PIV). CVC placement requires select trained personnel and poses the risk of complications, including central line associated blood stream infections (CLABSIs). Prompt initiation of vasopressors is suggested to achieve a goal mean arterial pressure (MAP) of 65 mmHg and reduce further decompensation and mortality. Peripheral administration of Norepinephrine has become a widely accepted practice among critical care units, but research lacks specific guidance for optimal and safe administration. Institutions have implemented protocols and evaluation of these protocols support short-term administration of vasopressors through PIVs, specifically less than 72 hours. One study rationalized their use of a higher concentrated Norepinephrine in attempt to limit the infusion volume and possibly lower peripheral blood vessel wall stress, but there is no data to support this rationale.

Purpose: To compare the rate of extravasation between two Norepinephrine concentrations when administered through a PIV.

Methods: This was a multi-center, retrospective comparison of extravasation rates between groups of patients admitted with shock who received Norepinephrine 32 mcg/mL or 64 mcg/mL from 1/1/2024-1/1/2026. Patients were included if they were ≥ 18 years old, admitted to an ICU, administered norepinephrine through a peripheral IV, and received

either phentolamine or nitroglycerin for extravasation. Subjects were excluded if a CVC was already being used for vasopressor administration.

Results: A total of 11,341 patients were screened of which 139 patients met the inclusion criteria. More patients received the 32 mcg/mL concentration (n=104) compared to the higher concentration of 64 mcg/mL (n=35). There was no significant difference seen between the 32 mcg/mL and 64mcg/mL concentrations in terms of median dose of Norepinephrine at time of extravasation (6 mcg/min vs 8 mcg/mL, p=0.59) and median duration of Norepinephrine prior to extravasation (12 hours vs 12 hours, p=0.91). There was also no significant difference between the two concentrations for the outcomes of peripheral site of Norepinephrine administration, size of the peripheral IV, and whether a CVC was placed following extravasation.

Conclusion: There is no difference in the incidence of extravasation between the 32mcg/mL and 64mcg/mL concentrations of Norepinephrine when administered through a peripheral intravenous line.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluating the Impact of Hormonal Therapy Administered to the Potential Organ Donor Following Catastrophic Traumatic Brain Injury

Author: Sophie Ruger

Primary Preceptor: Piech Lina

Institution: Advocate Christ Medical Center and Advocate Children's Hospital

Abstract:

Purpose

A paucity of evidence exists surrounding hormonal replacement therapy before brain death declaration to

improve donor stability and organ recovery. Institutional medication use evaluations suggest the

combination of levothyroxine, hydrocortisone, and vasopressin improves hemodynamic stability in

patients with catastrophic traumatic brain injury (TBI). However, practice varies across institutions, and

guidance on levothyroxine use remains limited. This study evaluates how pre brain death hormonal

therapy including levothyroxine influences vasopressor needs and organs procured. This study aims to

inform clinical decision-making and guide protocols.

Methods

This multi-center, retrospective, comparative analysis assessed patients admitted to the intervention site

or the control site between November 1, 2020, and August 1, 2025. A report was generated from the

electronic health record to identify potential patients, and patients were considered for inclusion if they

were at least 18 years of age, had a catastrophic traumatic brain injury, were admitted to the

interventional or control site, received levothyroxine if in the intervention group, and declared brain dead

during admission. At the intervention site, the intervention consists of levothyroxine 200 mcg IV push

once, hydrocortisone IV, and vasopressin 0.04 units/min IV infusion. The control received the same

regimen excluding levothyroxine. The primary objective is to compare the change in vasopressor

requirements, expressed as norepinephrine equivalents, following hormonal therapy. Secondary

objectives include evaluating time to brain death diagnosis, vasopressor requirements in norepinephrine

equivalents prior to brain death, heart rate (baseline, four hours, and immediately prior to brain death), as

well as the total number of organs procured. Safety outcomes will assess the incidence of severe

hypertension (SBP ≥180 mmHg), severe tachycardia (HR ≥150 bpm), and new onset arrythmia.

Results/Conclusion

The study cohort has been identified and data collection is complete. Statistical analyses are currently

underway and final results are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Safety analysis of lidocaine utilization post-lung transplant

Author: Jude Sammani

Primary Preceptor: Alyson Prom

Institution: Northwestern Memorial Hospital

Abstract:

Transcricoid and transtracheal lidocaine are considered the preferred topical anesthetic for flexible bronchoscopy without sedation. While caution is exercised in patients with advanced age, impaired liver function, and congestive heart failure, the use of lidocaine in any patient is not benign, having been related to cardiac and neurotoxicity at high levels of exposure. Depending on institutional practices, lung transplant recipients (LTRs) may undergo nearly daily bronchoscopies for the first several days following transplantation. During these procedures and throughout their post-operative course, they may receive lidocaine in a variety of applications, including topical and mucosal membrane application, through tracheostomy, and via nebulization. At the 894-bed academic medical center this review was conducted at, there is no protocol in place to quantify additive lidocaine exposure or monitor specifically for lidocaine toxicity in LTRs. The purpose of this review is to quantify the average amount of lidocaine patients receive in their first five post-operative days, and to assess the incidence of potential lidocaine toxicity in the form of cardiac or neurologic abnormalities. This retrospective medication use evaluation reviewed LTRs from January 1, 2025, to October 31, 2025. All adult patients who were administered any form of lidocaine in the first five postoperative days were included in this review. Data collection occurred through chart review to identify patient risks for lidocaine toxicity, extract specific administration times and doses of anesthetic for each individual patient, and determine if pre-specified neurological or cardiac toxicity symptoms occurred. The primary outcome of interest was determined as average lidocaine exposure (mg/kg) within 5 days post-lung transplant, followed by a secondary outcome of adverse effect occurrence. Statistical analysis will be primarily descriptive in nature. Data collection is in progress; results have not been obtained at this time. Conclusions will be made after completion of data collection and statistical analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: 4-Factor Prothrombin Complex Concentrate; Weight-based vs Fixed Dosing for Oral Factor Xa Inhibitor Reversal for Intracranial Hemorrhage

Author: Richard Schultz

Primary Preceptor: Austin Dillon

Institution: HSHS St. John's Hospital - Hospital Sisters Health System

Abstract:

Purpose

As oral factor Xa inhibitor (FXaI) anticoagulants, such as rivaroxaban and apixaban, see more widespread use, the need for reversal in patients with life-threatening bleeds becomes more important. For the drug of choice, four-factor prothrombin complex concentrate (4F-PCC), optimal dosing for this indication remains an open question. Guidelines recommend either a weight-based dose (25-50 units/kg) or a fixed dose (2000 units) for reversal of FXaI in life-threatening hemorrhage. This study's goal is to compare the efficacy and safety of these dosing regimens for patients taking an FXaI presenting with intracranial hemorrhage.

Methods

This was a single-center, retrospective, pre/post cohort study of patients taking apixaban or rivaroxaban who received 4F-PCC for intracranial hemorrhage. Information was collected via chart review. In November 2020, institution policy regarding 4F-PCC for FXaI reversal was changed from weight-based to a fixed dosing. Patients were assigned to cohorts based upon the dosing protocol used. Exclusion criteria included <18 years of age, use of anticoagulant other than apixaban or rivaroxaban or ≥2 antiplatelet agents, pregnant, or incarcerated. The primary outcome was treatment failure, defined as need for rescue therapy 3-48 hours after 4F-PCC infusion or inpatient mortality. Secondary outcomes included hospital and ICU length of stay and occurrence of thromboembolic events. Recorded baseline characteristics included age, sex, weight, creatinine clearance, FXaI drug/dose, indication for FXaI, antiplatelet used, trauma involvement, type of ICH, and hemostatic agents used.

Results

Records of 100 4F-PCC administrations have met inclusion criteria. Among them, 21 received a weight-based dose and 71 received a fixed-dose. Conclusions are pending further data analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Retrospective Evaluation of the Neonatal Postoperative Pain Pathway and its Impact on pain management in Neonatal Intensive Care Units across a System Enterprise

Author: Lucy Sherlock

Primary Preceptor: Kelly Kopec

Institution: Advocate Lutheran General Hospital

Abstract:

Purpose: A postoperative pain pathway was implemented in the Neonatal Intensive Care Units (NICUs) throughout the system enterprise in the fall of 2024. Prior to implementation, there was variability in how pain was managed in the NICU. The goal of the pathway was to create a standardized approach to assessing and treating pain based on type of procedure and NPASS scoring. Previous studies demonstrated a reduction in opioid requirements without an increase in pain scores following the implementation of a standardized pathway. The purpose of this study is to evaluate the effectiveness of the implemented postoperative pain pathway by assessing its impact on opioid utilization, reported pain scores, and overall compliance in the NICU.

Methods: A retrospective chart review was performed for NICU patients who underwent surgical procedures requiring postoperative care. The primary outcomes include assessment of compliance with the pain pathway, daily average NPASS scores, and cumulative daily opioid doses for 3 days post-surgery. The secondary outcomes include the need for additional pain and sedation medications outside of the pathway, duration of days on ventilator post-surgery, duration of days to full feeds post-surgery, and the number of patients requiring pain medications following the 3-day study period.

Results: Results will be submitted within final slides.

Conclusion: Results will be submitted within final slides.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Medication Persistence and Discontinuation Reasons for Patients Prescribed Injectable Immunomodulators in Autoimmune Conditions

Author: Mohini Sood

Primary Preceptor: Lisa Kumor

Institution: University of Illinois at Chicago Specialty Pharmacy Services

Abstract:

Purpose: Biologic therapies have transformed management of immune-mediated diseases; however, medication persistence remains low in real-world practice. Sub-optimal medication persistence has been linked to disease flares, increased healthcare utilization, and higher costs. While existing studies quantify medication persistence rates, they rarely explore discontinuation reasons to inform pharmacist-driven interventions. At our health-system specialty pharmacy, this project aims to evaluate persistence among patients with autoimmune conditions and classify discontinuation reasons to guide targeted strategies that support persistence and continuity of care.

Methods: This single-center, retrospective chart review will include approximately 150 adult patients (≥ 18 years) with at least one self-administered injectable biologic medication dispensed from from our health-system specialty pharmacy between January 1, 2023, and December 31, 2024, enrolled in dermatology, gastroenterology, or rheumatology patient management programs. Patients will be excluded if pediatric, did not have a dispense from the dedicated specialty pharmacy, or were not enrolled with our health-system specialty pharmacy. The primary outcome will be the proportion of patients persistent on therapy at 12 months, defined as remaining on biologic therapy without a gap in supply exceeding 60 days or a documented discontinuation. Secondary outcomes will include classification of discontinuation reasons as modifiable versus non-modifiable and clinically appropriate versus inappropriate. Findings will inform pharmacist-led interventions targeting modifiable discontinuation reasons. Data will be obtained from dispensing and enrollment reports and Epic. Variables will include demographics, prescriber specialty, medication details (drug, route, dose, directions, initiation date),

dispensing history (fill dates, refill intervals, therapy gaps), and discontinuation details (date and documented reason). Chart review will confirm diagnoses, verify discontinuation events, and capture the reason for discontinuation, which will be assigned into categories through consensus with the research team. Data will be aggregated by patient–medication pairs and analyzed descriptively to summarize persistence rates, discontinuation classifications, and distributions across specialty populations.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Antimicrobial Prophylaxis in Traumatic Facial Fractures in Intensive Care Units

Author: Christina Stacy

Primary Preceptor: Nicole Leshko

Institution: Northwestern Memorial Hospital

Abstract:

Purpose: Traumatic facial fractures are a common component of multisystem trauma and are frequently managed in the intensive care setting. Current American Association for the Surgery of Trauma (AAST) guidelines and supporting literature discourage prolonged antimicrobial prophylaxis for most facial fractures given the lack of demonstrated reduction in infection rates and the potential for adverse events. Despite these recommendations, variation in prescribing practice remains. At our large academic medical center, we observe frequent use of extended antibiotic prophylaxis in this population and hypothesize that local prescribing practices do not align with current national guideline recommendations. The purpose of this study is to evaluate antimicrobial prophylaxis practices for traumatic facial fractures at our institution through assessing the adherence to national guidelines and institutional guidance.

Methods: This single-center, retrospective quality improvement study includes adults (≥18 years) admitted to the SICU or NSICU following traumatic facial injury who received amoxicillin/clavulanate or ampicillin/sulbactam for injury prophylaxis between August 1, 2024, and August 1, 2025. Patients who are pregnant, incarcerated, have non-traumatic facial injuries, skull-base fractures, or received antibiotics for concomitant infections were excluded. Data will be obtained through our electronic health record data reports and manual chart review. Collected variables include demographics, injury characteristics, fracture number and type, surgical management approach, antimicrobial agent, duration of therapy, and recommending service. Primary outcomes assess adherence to AAST guidelines and institutional guidance. Secondary outcomes include incidence of infection at the injury site(s), prescribing patterns, cost of total antimicrobial use, and incidence of Clostridioides difficile infection.

Results and Conclusion: Data collection and analysis are currently in progress; therefore, results are pending. Findings will be used to validate internal guidance documents, optimize local prescribing patterns, and identify opportunities to reduce unnecessary antimicrobial use and costs.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Retrospective Analysis of Angiotensin II in Liver Failure

Author: Erica Stone

Primary Preceptor: Sophia Brown

Institution: Northwestern Memorial Hospital

Abstract:

Patients with advanced liver disease often experience complex circulatory and hemodynamic disturbances, yet evidence guiding vasopressor selection in this population is limited. Angiotensin II (ATII) demonstrated efficacy in vasodilatory shock in the ATHOS-3 trial, however, patients with severe hepatic dysfunction were excluded. This study aims to describe the efficacy of angiotensin II on hemodynamic response in critically ill patients with severe liver disease.

This retrospective cohort study includes adult patients admitted to the medical or surgical intensive care units (ICU) at a large academic tertiary care center who received ATII for vasodilatory shock between July 2024 and June 2025. The primary outcome is hemodynamic response at 3 hours after ATII initiation, defined as achievement of mean arterial pressure (MAP) ≥ 65 mmHg or an increase in MAP of at least 10 mmHg from baseline, between patients with a Model for End Stage Liver Disease (MELD) score of ≥ 30 and those <30. Secondary outcomes include concomitant vasopressor requirements, duration and maximum dose of ATII infusion, ICU length of stay, hospital length of stay, and in-hospital mortality. Safety outcomes include incidence of new thrombosis and documented peripheral ischemia after ATII initiation. Concomitant vasopressor dose calculations will be converted to and reported in norepinephrine-equivalent doses, as defined by the ATHOS-3 trial. Multivariable analyses will be performed to evaluate the association between liver disease severity and hemodynamic response.

Results are pending at the time of abstract submission and will be reported at the time of presentation.

This study will aim to provide critical insight into the hemodynamic effectiveness and safety of angiotensin II in patients with advanced liver disease, addressing an important

evidence gap in vasodilatory shock management. We hope the findings of this study will help inform vasopressor selection and optimize hemodynamic support strategies in this high-risk population.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Impact of Pharmacist-Led Ambulatory Care Visits for the Optimization of Guideline-Directed Medical Therapy in Patients with HFrEF

Author: Will Strauss

Primary Preceptor: Bethany Denny

Institution: Saint Mary of Nazareth Hospital - Chicago Prime Saint Mary of Nazareth Hospital

Abstract:

Abstract (maximum 300 wBackground: Heart failure with reduced ejection fraction (HFrEF) is associated with

high morbidity and mortality, with improved outcomes dependent on optimization of guideline-directed medical therapy (GDMT). Pharmacists play an important role in medication management, titration, and patient education, which may support timely therapy optimization. This research compares the impact of pharmacist-led ambulatory care visits with cardiology-led care on GDMT optimization in patients with HFrEF.

Methods: This retrospective study identified adults (≥18 years) with a diagnosis of HFrEF who completed at least two heart failure management visits between June 1, 2022, and June 1, 2025. Patients followed in the SMNIL Pharmacotherapy Clinic comprised the pharmacist-led group, while patients managed exclusively in the cardiology clinic comprised the cardiology group. Exclusion criteria included heart failure without reduced ejection fraction, age <18 years, pregnancy or breastfeeding, incomplete medical records, or fewer than two qualifying visits. Data collected included patient demographics, baseline left ventricular ejection fraction, baseline GDMT, number of follow-up visits, GDMT interventions (medication initiation, titration, or

discontinuation), and heart failure–related hospitalizations. The primary endpoint was the percentage of patients on optimal GDMT, defined as maximally recommended or maximally tolerated doses, at study end. Secondary endpoints included GDMT class utilization, number and type of medication interventions and heart failure related hospital admissions.

Results: A total of 48 patients were analyzed (24 pharmacist-led, 24 cardiology-led). Maximum doses of ACEi/ARB/ARNi were achieved in 46% pharmacist-led patients versus 50% cardiology-led patients (p= 0.77), SGLT2 inhibitor optimization was 71% versus 63% patients (p=0.54), mineralocorticoid receptor antagonist optimization was 63% versus 63% (p=1.0), and beta-blocker optimization in 50% versus 29% patients (p=0.14). No comparisons were statistically significant.

Conclusion: Pharmacist-led ambulatory care was comparable to cardiology-led care in initiating and optimizing maximally tolerated GDMT for patients with HFrEF.ords)

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Comparing Outcomes of Standard-Versus Reduced-Dose Apixaban and Rivaroxaban for Extended Treatment of Venous Thromboembolism in Cancer Patients

Author: Adam Sulh

Primary Preceptor: Claresta Bergman

Institution: VA-Chicago, IL-Jesse Brown VA Medical Center

Abstract:

Purpose: Cancer-associated thrombosis carries a sustained risk of recurrent venous thromboembolism, often necessitating extended anticoagulation beyond six months. While reduced-dose direct oral anticoagulants are recommended for extended treatment in the general population, patients with cancer were underrepresented in pivotal dose-reduction trials. This study aims to evaluate the safety and effectiveness of reduced-dose versus standard-dose apixaban and rivaroxaban for extended anticoagulation in patients with cancer.

Methods: This is a single-center, retrospective cohort study conducted at a Veterans Affairs medical center. Adult patients with active cancer who received apixaban or rivaroxaban for the treatment of deep vein thrombosis or pulmonary embolism between March 1, 2020, and March 1, 2025, were included. Eligible patients completed a minimum of six months of standard-dose anticoagulation before transitioning to extended therapy with either standard-dose or reduced-dose apixaban or rivaroxaban. Patients were categorized based on dosing strategy during the extended treatment phase. The primary efficacy outcome is recurrent venous thromboembolism or all-cause mortality. The primary safety outcome is major bleeding, defined according to International Society on Thrombosis and Haemostasis criteria. Secondary outcomes include venous thromboembolism-related mortality, non-major bleeding, and composite bleeding outcomes. Descriptive statistics will be used to compare outcomes between dosing groups and by anticoagulant agent.

Results and Conclusions: Results will be presented at the Illinois Pharmacy Resident Conference in May 2025.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Enhancing Heart Failure Management for Veterans in a Pharmacist-Led Cardiology Clinic

Author: Sindhya Sunil

Primary Preceptor: Katelyn Buckingham

Institution: VA-Danville, IL-VA Illiana Health Care System

Abstract:

Purpose: Heart failure (HF) affects approximately 5% of U.S. Veterans receiving care through the Department of Veterans Affairs and is associated with significant morbidity and mortality. Although guideline-directed medical therapy (GDMT) improves clinical outcomes, its utilization remains inconsistent due to factors such as medication nonadherence, comorbidities, and socioeconomic barriers. The purpose of this quality improvement project is to evaluate the impact of a pharmacist-led cardiology clinic on optimization of GDMT and clinical outcomes among Veterans with heart failure at Veterans Affairs (VA) who had a heart failure exacerbation in the last year.

Methods: Veterans with a diagnosis of heart failure who were hospitalized or treated in urgent care settings for HF exacerbations during the active project period (December 1, 2024 through December 1, 2025) were identified using the National Academic Detailing Services Heart Failure Dashboard. Eligible patients were contacted via telephone and offered follow-up in the heart failure clinic supervised by a cardiology clinical pharmacist practitioner (CPP). Patients who agreed were enrolled in the heart failure clinic and the CPP provided medication management and patient education which focused on adherence and understanding of HF pharmacotherapy. Data collected through electronic health record review included patient demographics, HF classification, hospitalization details, medication changes, timing of cardiology and pharmacist follow-up, appropriateness of GDMT initiation or titration, and changes in HF symptoms. The primary outcome is the proportion of Veterans receiving clinically appropriate GDMT. Secondary outcomes include HF-related readmission rates, symptom control, and all-cause mortality. Outcomes were compared with Veterans not followed by cardiology CPP.

Results: Results are pending at the time of abstract submission and will be available at the time of presentation.

Conclusion: Conclusions regarding the impact of pharmacist-led HF management on GDMT optimization and clinical outcomes are pending and will be presented upon project completion.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Therapeutic Anticoagulation Timing after Traumatic Brain Injuries

Author: Vicky Tang

Primary Preceptor: Erica Konopka

Institution: Loyola University Medical Center

Abstract:

Background: Traumatic brain injury (TBI) is a major cause of morbidity and mortality in the United States and frequently affects older adults with multiple comorbidities, including those requiring chronic therapeutic anticoagulation. Management of anticoagulation following TBI must balance the competing risks of thromboembolism and intracranial hemorrhage progression when determining the timing of resumption. Current guidelines support anticoagulation resumption in most patients but provide limited and variable guidance on optimal timing, resulting in inconsistent clinical practice.

Purpose: To evaluate the association between timing of therapeutic anticoagulation resumption (<14 days vs ≥14 days) after traumatic brain injury and clinical outcomes, including bleeding complications, thromboembolic events, and mortality.

Methods: This is a retrospective, single-center observational study of adult patients (≥18 years) admitted to an academic medical center with a diagnosis of traumatic brain injury between August 1, 2020 and August 1, 2025. Eligible patients received either therapeutic anticoagulation prior to admission or required initiation of therapeutic anticoagulation during hospitalization. Patients with spontaneous intracranial hemorrhage were excluded. Patients were stratified into early (<14 days) and late (≥14 days) anticoagulation resumption groups. The primary endpoint is bleeding after anticoagulation resumption, defined as a new intracranial hemorrhage or expansion of existing hemorrhage on imaging. Secondary endpoints include thromboembolic events, clinically significant bleeding, functional outcomes measured by Glasgow Outcome Scale, hospital length of stay, 90-day mortality, and 90-day readmission. Exploratory subgroup analyses will assess outcomes by bleed characteristics, TBI severity, neurosurgical intervention, and anticoagulant class.

Results and conclusions: Pending, to be included in final presentation

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: “Impact of Pharmacokinetics Protocol Redesign on Patient Safety and Vancomycin Therapeutic Outcomes”

Author: Anna Tanzif

Primary Preceptor: Ursula Patel

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Abstract

Title:

“Impact of Pharmacokinetics Protocol Redesign on Patient Safety and Vancomycin Therapeutic Outcomes”

Background:

Vancomycin is a glycopeptide antibiotic with activity against gram-positive bacteria, including methicillin-resistant Staphylococcus aureus (MRSA), an organism associated with high morbidity and mortality amongst the US Veteran population. Vancomycin dosing and monitoring requires the consideration of several patient and infection specific factors. In July 2025, our local facility implemented a new collaborative pharmacokinetic protocol model to optimize vancomycin management for veteran patients. The integrated approach of this model was designed to leverage the expertise of both Clinical Pharmacist Practitioners (CPP) and the Inpatient Clinical Pharmacist (IPCP) Pharmacokinetics Service to allow for continuous vancomycin management coverage, creating seamless 24/7 pharmaceutical care.

Objective

The primary aim of this study is to evaluate vancomycin dosing and safety outcomes in the setting of an integrated approach to pharmacokinetic management which coordinates expertise across clinical pharmacy teams at a veterans facility.

Methods:

This is a pre/post-intervention, retrospective cohort study in an inpatient Veterans Hospital setting. Data collection will take place at two different points in time (prior and post transition to the CPP/IPCP managed collaborative pharmacokinetic protocol model), utilizing the Computerized Patient Record System (CPRS). The primary outcome will be the percentage of patients who achieved therapeutic vancomycin area under the curve (AUC) levels (400-600 mg × h/L) within the first 72-96 hours of therapy and the rate of vancomycin therapy discontinuation within 72 hours of therapy initiation. Secondary outcomes will include safety endpoints as well as factors related to vancomycin duration and goal AUC attainment. Planned subgroup analyses on select primary and secondary outcomes will be performed on patients who received vancomycin until at least one level/set of levels were drawn. Descriptive statistics will primarily be used for data analysis.

Results and Conclusion:

Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Optimizing Enoxaparin Dosing: Outcomes of a Pharmacy Consult Protocol for High-Risk Populations

Author: Jake Torbert

Primary Preceptor: Matthew Smith

Institution: HSHS St. John's Hospital - Hospital Sisters Health System

Abstract:

Enoxaparin is a common parenteral anticoagulant used in the inpatient setting, and there is potential for sub-optimal dosing in patients with renal insufficiency or at extremes of body weight. In these populations, therapeutic anti-Xa level monitoring can be utilized to adjust enoxaparin doses. However, anti-Xa levels may not be ordered or drawn appropriately, leading to improper dose adjustments. Literature has shown that pharmacy driven anti-Xa monitoring protocols can increase the number of correctly drawn levels. This study's goal is to determine the impact of a pharmacy-to-consult enoxaparin protocol for patients at risk of sub-optimal enoxaparin dosing.

This is a single-center, retrospective, pre/post cohort study conducted after the implementation of a pharmacy-to-consult enoxaparin protocol for patients with a BMI ≥40 kg/m2 or ≤18 kg/m2, weight ≥150 kg, and/or a creatinine clearance ≤30 ml/min. Relevant information was collected via electronic health record chart review. Excluded patients included those who were pregnant, had acute kidney injury as defined by KDIGO criteria, had a creatinine clearance <20 ml/min, or if they received ≤ 3 doses of therapeutic enoxaparin. The primary outcome was proper utilization of anti-Xa monitoring, defined as an anti-Xa level drawn 2-6 hours after the 3rd dose of enoxaparin. Secondary outcomes include incidence rates of venous thromboembolism, major bleed events and total number of anti-Xa levels drawn. Finally, a subgroup analysis of patients with appropriately drawn anti-Xa levels was conducted to determine the frequency of therapeutic anti-Xa levels and the appropriateness of enoxaparin dose adjustments per protocol. Baseline characteristics recorded included, but were not limited to age, sex, height, weight, serum creatinine, number of therapeutic enoxaparin doses received, anti-Xa level results, reported venous

thromboembolism (VTE) events or major bleeding events (gastrointestinal bleed, hemorrhagic stroke, use of ≥2 units of transfused red blood cells).

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Optimizing Antimicrobial Therapy for Acute Osteomyelitis: Assessing the Necessity of Broad-Spectrum Antimicrobial Agents

Author: Jason Torossian

Primary Preceptor: Andrew DeSio

Institution: Loyola University Medical Center

Abstract:

Purpose/Rationale:

The 2015 IDSA Guidelines for Native Vertebral Osteomyelitis provided frameworks for the diagnosis and management of osteomyelitis, particularly aimed at vertebral sources. These guidelines established the groundwork for culture-based therapy and appropriate treatment durations; however, the scope was limited to vertebral infections. The 2022 WikiGuidelines Consensus Statement on Pyogenic Osteomyelitis represents a shift by including a broader spectrum of osteomyelitis etiologies, including prosthetic joint infections, while concurrently integrating clinical consensus and data-driven methods. Additionally, the consensus statement emphasized shorter, narrower, and patient-focused regimens consistent with stewardship goals to lessen unnecessary exposure to anti-MRSA, anti-Pseudomonal, and anti-anaerobic agents.

The 2023 IWGDF/IDSA Guidelines on Diabetic Foot Infections concentrated on osteomyelitis within diabetes-related foot infections, balancing between polymicrobial wounds and

antimicrobial stewardship. Overall, the development of these guidelines demonstrates a growing refinement in antimicrobial stewardship, moving from broad empiric coverage to patient-specific, evidence-based management of acute osteomyelitis that aims to optimize efficacy while relieving the development of antibiotic resistance. The purpose of our study is to evaluate current clinical practice and identify areas of improvement to ensure alignment with established guidelines.

Methods and Materials:

This is a retrospective, single-centered, cohort study of patients who received antimicrobial treatment for acute osteomyelitis at an academic medical center. Patients 18 years of age and older who have an ICD-10 diagnosis for acute osteomyelitis between January 1st, 2015, and October 1st, 2025, will be included. Patients will be excluded if they have documented chronic osteomyelitis, history of previously treated osteomyelitis, died within 72 hours from presentation, or were pregnant or incarcerated. Descriptive statistics will be reported as means ± standard deviations or medians with interquartile ranges, depending on data distribution. An estimated sample size of 100 patients will be included in this retrospective chart review.

Results: To be presented at ILPRC

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Venous Thromboembolism (VTE) Prophylaxis Modalities Following Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA)

Author: Saruul Tsogtbayar

Primary Preceptor: Mara Andersen

Institution: VA - Hines, IL - Edward Hines, Jr. VA Hospital

Abstract:

Saruul Tsogtbayar, PharmD PGY-1 Pharmacy Resident; Mara Andersen, PharmD; Amanda Kozlowski, PharmD, BCPS; Josiah Baker, PharmD, BCPS; Joelle Farano, PharmD, BCPS

Patients undergoing total hip arthroplasty (THA) and total knee arthroplasty (TKA) are at significantly increased risk for venous thromboembolism (VTE) due to surgical trauma, endothelial injury, and postoperative immobility. Current guidelines recommend multiple options for VTE prophylaxis after TKA and THA, including aspirin and anticoagulants, but provide limited guidance on selecting a specific agent based on patient specific risk factors. At this VA, aspirin is the standard regimen for VTE prophylaxis following THA and TKA, while alternative agents may be prescribed at the discretion of the orthopedic surgeon without a formal standardized risk stratification process. This quality improvement project will assess the current prescribing practices and evaluate whether the presence of multiple risk factors for VTE increase the incidence of VTE following THA and TKA. Furthermore, the findings may support the implementation of a standardized risk assessment tool to guide the choice of VTE prophylaxis regimens and improve patient safety by reducing VTE incidence without increasing bleeding risk.

Methods:

This retrospective review will include patients who underwent primary or revision THA or TKA between January 1 and June 30, 2025. Data will be collected from the VA electronic health record and will include demographic characteristics, procedure type, risk factors for VTE, total Caprini score, and the prophylactic regimen. Outcomes assessed within 90 days postoperatively will include imaging-confirmed VTE events and major bleeding

complications, defined in the study as surgical site bleeding requiring intervention, transfusion, or discontinuation of prophylaxis. Descriptive statistical analysis will be used to summarize patient risk profiles, prescribing patterns, and clinical outcomes.

Results: Ongoing. To be presented at the Illinois Pharmacy Resident Conference.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of the Safety, Tolerability, and Efficacy of Rapid Prothrombin Complex Concentrate Infusion

Author: Tessa Vagasky

Primary Preceptor: Giles Slocum

Institution: Rush University Medical Center

Abstract:

Rapid anticoagulation reversal is critical for life-threatening hemorrhage or emergent surgery. Manufacturers recommend a prothrombin complex concentrate (PCC) infusion rate of ~ 210 units/min. However, data on faster administration is limited. We evaluated the safety and efficacy of "rapid" (500 units/min) vs. standard PCC infusion for emergent warfarin reversal. This study aimed to evaluate the safety and tolerability of intravenous push (IVP) PCC for emergent warfarin reversal compared with the manufacturer-recommended infusion rate.

This single-center, retrospective study (July 2016–June 2025) included adults receiving PCC for warfarin reversal. Patients were grouped by infusion rate: standard (pre-implementation) vs. rapid (post-implementation at 500 units/min). Primary outcomes were the incidence of thrombotic events during hospitalization and infusion-related reactions. Secondary outcomes included hemodynamic changes (SBP), in-hospital mortality, and efficacy (INR ≤ 1.4 within 60 minutes). The study was granted Institutional Review Board (IRB) approval prior to data collection. Statistical analyses were performed using SPSS.

Of 469 screened patients, 154 were analyzed (n=87 standard; n=67 rapid). Thrombotic events occurred in 6.9% of the standard group (2 deep vein thrombosis (DVT), 1 pulmonary embolism (PE), 2 Stroke, 1 myocardial infarction (MI)) vs. 10.4% in the rapid group (5 DVT, 1 PE, 1 Stroke); (p = 0.43). In-hospital mortality was similar (19.5% standard vs. 16.4% rapid). Efficacy (INR ≤ 1.4) within 60 minutes was achieved in 67.2% of standard rate patients vs. 58.8% of rapid rate patients among those with follow-up labs.

Administering PCC at 500 units/min for emergent warfarin reversal was not associated with a significant increase in adverse events or reduced efficacy compared to standard rates. These findings suggest that rapid PCC administration is a safe and efficient alternative in emergent settings.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Development and Evaluation of a Culture Call-Back Clinical Decision Support Tool for Antibiotic Prescribing by Emergency Department Practitioners

Author: Delilah Velez

Primary Preceptor: Helena Ranieri

Institution: Advocate Illinois Masonic Medical Center

Abstract:

Purpose: Advanced Practice Providers (AAPs) often seek pharmacist guidance when responding to emergency department (ED) urine culture callbacks. The current pharmacist workflow is designed to accommodate review and intervention in complex patient cases, with limited time available for routine cases. The purpose of this quality improvement project is to develop a clinical decision support tool (CDST) to support independent antibiotic prescribing by APPs during urine culture follow-up.

Methods: The project will begin with a literature review and evaluation of current culture callback workflows, institutional guidelines, and the facility antibiogram. ED pharmacists will document urine culture callback encounters using a standardized data collection tool that captures common organisms, resistance mechanisms, renal function, allergy considerations, dosing recommendations, and challenges in interpreting susceptibility reports. This data will identify the most common reasons ED pharmacists are consulted and will guide the development of a CDST. A CDST will be developed and adjusted based on ED pharmacist feedback. After final approval from the infectious diseases (ID) pharmacist, physical copies of the CDST will be available in the ED, and electronic copies will be distributed to all ED APPs and pharmacists. The CDST will also be uploaded to a shared institutional platform. Following the implementation period of the CDST, ED pharmacists will use the same standardized data collection tool to document urine culture callback encounters, allowing for pre- and post-implementation comparison of consultation patterns and complexity. Additionally, APPs will be surveyed post-implementation to evaluate usefulness, usability, and overall satisfaction with the CDST. Findings will guide refinement of the CDST and inform its integration into the standard workflow for APPs.

Results: Pending

Conclusion: Pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of the Efficacy and Safety Outcomes of a Low Risk DVT Protocol

Author: Jialing Yang

Primary Preceptor: Jimmi Patel

Institution: Advocate Sherman Hospital

Abstract:

Title: Evaluation of the Efficacy and Safety Outcomes of a Low Risk DVT Protocol

Jialing Yang, PharmD, PGY1 Pharmacy Resident, Advocate Sherman Hospital

Jimmi Patel, PharmD, Clinical I Pharmacist, Advocate Sherman Hospital

Purpose: For patients with low-risk deep vein thrombosis (DVT), venous thromboembolism (VTE) guidelines recommend outpatient management over inpatient for comparable safety outcomes and reduced risk of pulmonary embolism (PE) and subsequent DVT. A low-risk DVT protocol was implemented at a local hospital emergency department (ED) to guide the selection for patients appropriate for outpatient DVT management with a direct oral anticoagulant (DOAC). The objective is to assess the safety and efficacy of the low-risk DVT protocol, comparing the percentage of patients discharged for DVT, length of stay, and the rate of readmission for DVT before and after protocol implementation.

Methods: This is a retrospective study conducted at an acute care community hospital in Illinois. Chart review was performed on ED patients with low-risk DVT who were eligible for DOAC therapy. Outcomes were compared for 6 months before (October 1, 2024, to March 31, 2025) and 6 months after (April 1, 2025, to September 31, 2025). The primary outcomes were the percentage of patients with low-risk DVT discharged from the ED, with DOAC prescribed at discharge, compliant with outpatient follow-up, and failure of therapy (readmission for DVT) within 3-6 months. The secondary outcomes were the length of stay, bleeding events, indication for non-DOAC therapy, non-DOAC agent prescribed, Time in Therapeutic Range (TTR) for warfarin, and compliance with anticoagulation clinic follow-ups.

Results (Preliminary): The percentage of patients discharged for DVT was 49% before implementation and 91% after, with a significant relative increase of 85% ($P < 0.005$) post-implementation. No significant changes noted in DOAC prescribed, compliance with follow-up, failure of therapy. No bleeding events were identified during the study period.

Conclusions: Based on the preliminary results, it seems like the protocol implemented was safe and effective in reducing unwanted hospital admissions for DVT.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Not a Breath of Relief: Nebulized Albuterol in Hyperkalemia

Author: Phoenix Yeung

Primary Preceptor: Hina Patel

Institution: Endeavor Health NorthShore Hospitals

Abstract:

Purpose:

Despite albuterol's established use in acute hyperkalemia management, recent data on its effect, with or without other hyperkalemia treatments, are sparse. The 2024 Kidney Disease Improving Global Outcomes Guidelines lack specific recommendations for albuterol's clinical application. Allon et al. (1990) introduced the concept of nebulized albuterol for hyperkalemia and concluded it was comparably effective to insulin with dextrose in 12 hemodialysis patients. More recently, Fletcher et al. (2023) concluded that there was no difference in potassium level changes or mortality between the insulin and insulin-albuterol groups in 204 patients. Within this health system's hyperkalemia order set, nebulized albuterol is an option when serum potassium exceeds 5.9 mEq/L or when EKG changes are present. The purpose of this initiative was to assess nebulized albuterol's impact on potassium levels and optimize utilization.

Methods:

This quality improvement project was deemed exempt from Institutional Review Board review. A retrospective chart review of adult patients who presented to five hospitals over a one-year period was conducted. Inclusion criteria encompassed patients with serum potassium levels of 5.9 mEq/L or greater who received medications from the hyperkalemia order set during the initial hyperkalemic episode within that hospital encounter. Patients were excluded if they had received any albuterol products, potassium supplements, or potassium-binding agents prior to admission. No significant difference was found in potassium reduction between the albuterol and non-albuterol groups over time at 4, 8, and 24 hours. Notably, nebulized albuterol was administered to some patients with potassium levels below 5.9 mEq/L, contrary to the order set guidelines. Based on these findings,

targeted educational sessions were provided to emergency medicine providers and hospitalists to discuss albuterol's role in hyperkalemia management and to increase awareness of alternative treatments. Following these educational interventions, nebulized albuterol utilization will be reassessed.

Results: In process

Conclusion: In process

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Accuracy of Documentation of Urinary Symptoms in Patients with Suspected Urinary Tract Infections

Author: Caleb Yoder

Primary Preceptor: Jaime Borkowski

Institution: Northwestern Medicine Delnor Hospital

Abstract:

Various methods have been employed to reduce the number of treated asymptomatic bacteriuria cases. One method employed in our system requires providers to denote urinalysis (UA) order indication from a selection of urinary tract-specific symptoms. Often, emergency department physicians (ED) order a UA and empiric antibiotics, which are carried throughout admission or lead to unnecessary treatment at discharge. The purpose of this study is to determine the concordance between urinary symptoms documented in provider notes and symptoms selected within the UA order within the ED.

This study is a retrospective, observational, descriptive study with the primary objective of determining the concordance of urinary symptom documentation between UA orders and chart documentation in patients with suspected urinary tract infections. The study population includes patients presenting to the ED and ordered a UA with reflex to culture by an ED provider between January 1 and June 30 of 2025. The primary outcome is the percentage of cases with matching documentation in the urinalysis order and provider notes. Symptom selection is based on a specific set of options within the ordering platform. Matching documentation will be established if the selection at UA order entry can be mapped to at least one symptom documented in the patient chart. Data to be collected include age, gender, ethnicity, residence, symptom category selected in the UA order, urinary symptom chart documentation, systemic signs of infection, related imaging, presence of catheter, urine culture specimen source, urine culture results, if an antibiotic was ordered, hydration status, pregnancy status, planned urological procedure within one week, and history of renal transplant within a month. Baseline demographics will be assessed using descriptive statistics. Continuous data will be compared using Student's t-

test and nominal data will be compared using Chi-square test. Data collection is in progress. Results and conclusion are pending.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Evaluation of Oral Vancomycin Prophylaxis for Clostridioides difficile

Author: Lucia Zavala

Primary Preceptor: Sandra Naegele

Institution: Endeavor Health NorthShore Hospitals

Abstract:

To reduce Clostridioides difficile infection (CDI), oral vancomycin prophylaxis (OVP) may be administered to high-risk patients including adults ≥ 65 years, patients on systemic antibiotics, recently hospitalized, with weakened immune systems, or with prior history of CDI. This project aimed to assess current OVP practices at this institution. This quality improvement project was exempt from Institutional Review Board approval. A retrospective review of electronic health records was performed for adult patients who received OVP between July 1, 2024 through December 31, 2024. The primary objective was to assess whether a 125 mg daily or 125 mg twice daily dose was prescribed. Secondary objectives consisted of number of days OVP continued after discontinuing systemic antibiotics, risk factors prompting initiation of OVP, systemic antibiotics concurrently administered, rectal swab screening results, number of patients who developed CDI within 6 months of completing OVP, and OVP ordering provider type. Descriptive statistics were utilized. A total of 63 patients met inclusion criteria, with median age being 78 years (79.4% were ≥ 65). OVP was administered daily for 86% of patients and the median days of OVP following completion of antibiotics was 5 days. 11.1% of patients developed CDI within 6 months. CDI risk factors prompting OVP therapy included being hospitalized within 60 days prior to OVP (76.2%) immunocompromised (39.7%), concurrent systemic antibiotics (96.8%), and history of CDI (50.8%). All but two patients received at least one systemic antibiotic. ID providers ordered OVP for 81% of patients. Once daily OVP with a duration of 5 days post-systemic antibiotics would be reasonable for protocol standardization based on current usage and guideline recommendations. Factors to consider for OVP initiation include age, recent hospitalization, concurrent systemic antibiotics, rectal screening results, and prior history of CDI. The results of this evaluation will be utilized to develop an OVP system-wide guideline.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Enhancing Procedural Area Safety: Implementation of a Narcotic Waste Workflow and Drug Assays in a Community Teaching Hospital

Author: Elana Zelden

Primary Preceptor: Eva Galka

Institution: Endeavor Health Swedish Hospital

Abstract:

Purpose: Procedural areas within hospitals manage large patient volumes and require frequent use of controlled substance medications. The involvement of multiple providers in these settings increases the risk for drug diversion. The purpose of this study was to standardize a narcotic waste workflow within the pharmacy and anesthesia teams at a 289-bed community teaching hospital in Chicago, Illinois to promote the safe use of narcotics and reduce the risk of drug diversion in the operating rooms.

Methods: A combined retrospective and prospective analysis was performed to evaluate the effectiveness of implementing this standardized narcotic waste workflow in the hospital's key procedural areas, encompassing 12 suites across the Operating Room and the Center for Ambulatory Surgery. Pre-implementation data collected from August 1, 2025 through September 30, 2025 were used to assess baseline controlled substance metric trends and compliance with institutional controlled substance policies. The new workflow was implemented between October 1, 2025 and November 30, 2025. Under this process, controlled substances wasted by anesthesia providers were documented at the automated dispensing cabinets and returned to the pharmacy for volume validation and refractometer assaying done by a pharmacist. Any discrepancy identified was documented and addressed collaboratively by the pharmacy and anesthesia leadership.

The post-implementation phase, from December 1, 2025 to January 31, 2026, was used to evaluate controlled substance metrics and adherence to hospital policies following implementation of the new workflow. Metrics assessed included the number of

anesthesia-waste related discrepancies, anesthesia return-related discrepancies, number of users investigated for discrepancies, and incidences of non-compliance to hospital policies, including delays in administrations, waste and returns.

Results: Data analysis is ongoing.

Conclusion: Final results will be presented at the Illinois Pharmacy Residents Conference following completion of data analysis.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Develop a Standardized Formulary Review Process

Author: Frank Zhang

Primary Preceptor: Christopher Jones

Institution: Advocate Sherman Hospital

Abstract:

Develop a Standardized Formulary Review Process

Frank Zhang, PharmD, PGY1 Pharmacy Resident, Advocate Sherman Hospital; Christopher Jones, PharmD, MHA, BCPS, Director Pharmacy Operations, Advocate Sherman Hospital

Purpose: With the implementation of formulary harmonization across Advocate Health, there is a need for a standardized, systematic process to review all formulary medications annually. This review ensures that any necessary safety updates, therapeutic changes, or clinical practice adjustments are identified and implemented in a timely manner. Such a process is not only critical for maintaining consistency and optimizing patient care but is also mandated by The Joint Commission (TJC) under Medication Management, Element of Performance 9. This requirement emphasizes the importance of ongoing evaluation of medication use to mitigate risks, enhance therapeutic outcomes, and align with evidence-based practices.

Methods: This project aims to develop an administrative policy to standardize the evaluation of emerging medication safety and efficacy information. The policy will build upon existing workflows established by the Drug Policy Center and the Medication Safety Subcommittee while integrating artificial intelligence (AI) to optimize enterprise-wide formulary review. AI will be utilized to consolidate internal medication safety data from the Healthcare Risk Management Software (Origami Risk) and analyze event reports. Quarterly comparisons of reported events will identify percent changes, allowing prioritization of medications for review. Additionally, AI will collect emerging efficacy data on a quarterly basis, including recent guideline updates, new medication approvals, and other relevant clinical changes. Pharmacy residents will conduct detailed reviews of each identified

update to ensure formulary decisions remain current, evidence-based, and clinically appropriate.

Results: Research in progress

Conclusion: Research in progress

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Tolerability of Dose-Reduced Apixaban with Concomitant Posaconazole in Hematologic Malignancies

Author: Dina Zheng

Primary Preceptor: Dan Przybylski

Institution: Northwestern Memorial Hospital

Abstract:

Background: Patients with hematologic malignancies are at an increased risk of thrombosis and bleeding, making treatment of thrombotic events challenging. Antifungal prophylaxis is frequently used in patients with hematologic malignancies as patients are often immunocompromised. Posaconazole is an azole antifungal and a strong CYP3A4 and P-glycoprotein inhibitor, which interacts with substrates including apixaban, increasing exposure and bleeding risk, though there is minimal data describing the tolerability of concurrent use. Manufacturer labeling recommends a 50% apixaban dose reduction with concomitant strong CYP3A4 and P-glycoprotein inhibitors. Current literature describing the impact of this dosing approach on patient clinical outcomes including bleeding events and treatment failure is limited, particularly in patients with hematologic malignancies.

Objective: To evaluate the tolerability of dose-reduced apixaban among patients with hematologic malignancies receiving concomitant posaconazole.

Methods: This single-center, retrospective, observational study evaluated patients ≥18 years old with a hematologic malignancy receiving 50% dose-reduced apixaban for treatment of venous thromboembolism or other thrombotic events and concurrent posaconazole for at least 1 month between January 1, 2022, and August 31, 2025.

Results: A total of 35 patients were included in this study. Clinically significant bleeding requiring hospitalization or apixaban interruption occurred in 4 patients (11%). Major

bleeding occurred in 2 patients (6%) and no fatal bleeding events were observed. New or recurrent venous thromboembolism during apixaban treatment occurred in 11% of patients in this study.

Conclusion: In patients with hematologic malignancies, concurrent use of posaconazole and dose-reduced apixaban demonstrated the incidence of bleeding and recurrent thrombosis was comparable to that of standard apixaban dosing without concurrent posaconazole. This real-world study provides data on tolerability of dose-reduced apixaban with posaconazole specifically in hematologic malignancy patients, a population often underrepresented in clinical trials and at increased risk of treatment complications.

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Dirty or Not: Evaluating the Appropriate Use of Vancomycin and Daptomycin in Possible Blood Culture Contamination

Author: Yuang Zhu

Primary Preceptor: Erica Little

Institution: HSHS St. John's Hospital - Hospital Sisters Health System

Abstract:

Author: Yuang Zhu

Primary Preceptor: Erica Little

Institution: HSHS St. John's Hospital- Hospital Sisters Health System

Purpose: The rate of blood culture contamination with coagulase-negative Staphylococcus spp. (CONS) has been increasing based on surveillance reports, which raises the concern for the legitimacy of positive blood cultures in identifying true bacteremia. Currently, there are only a few clinical studies that assess the appropriate use of empiric antibiotics in patients with possible CONS-contaminated blood cultures. The purpose of this study is to assess the utilization of vancomycin and daptomycin and evaluate the clinical outcomes and cost associated with initiating empiric treatment in patients with likely contaminated blood cultures.

Methods: This is a single-center, retrospective chart review study, assessing patients ≥18 years of age who had at least one CONS positive blood culture with ≥2 sets of blood culture collected ≤24 hours apart, and either received or didn't receive any doses of vancomycin or daptomycin during the course of hospital stay. The criteria of blood culture contamination was based on the definition provided by CLSI and CDC. This chart review study assessed patients from October 1, 2024 to April 30, 2025. The primary outcome was 30-day readmission rate in patients with suspected bacteremia caused by same organism. The secondary outcomes evaluated the hospital length of stay, acute kidney injury, and any cost associated with vancomycin or daptomycin administration. Patients were screened through manual chart review for inclusion and exclusion criteria. The following data was collected: patient age, gender, ethnicity, length of hospital stay, inpatient antibiotic

regimen, cost of each vancomycin or daptomycin administration, CONS positive blood culture, 30-day readmission, and documented acute kidney injury.

Results and Conclusion are pending

2026 Illinois Pharmacy Resident Conference

Presentation Abstracts

Title: Retrospective Analysis of the Impact of a VRE UTI Treatment Comment on Urine Culture Results for Enterococcal Isolates

Author: Eric Zubek

Primary Preceptor: Jason Newton

Institution: Advocate Illinois Masonic Medical Center

Abstract:

Purpose: Studies show that aminopenicillins effectively treat vancomycin-resistant enterococcal (VRE) lower urinary tract infections (UTI) despite high minimal inhibitory concentrations (MIC) yet costly and broad-spectrum agents are still commonly utilized. Clinical decision support (CDS) tools are measures to promote appropriate antibiotic prescribing, though they can cause alert fatigue if not properly designed. Passive culture comments are a CDS option that do not generate alerts but can still influence prescribing behavior. On 5/28/24, a multicenter Midwest health system implemented a passive culture comment on VRE UTI cultures with the aim of increasing aminopenicillin use in this setting. The purpose of this project is to determine whether passive culture comments can positively influence appropriate prescribing for VRE UTIs.

Methods: This will be a retrospective, multi-center, observational analysis of urine VRE cultures and antimicrobial prescribing pre and post culture comment implementation, from 10/1/23 to 12/31/23 and 10/1/24 to 12/31/24, respectively. Clinical encounters will be reviewed to determine whether inappropriate agents were used in the treatment of VRE UTIs when an aminopenicillin would have been appropriate. Patients with a VRE isolate in their urine culture and who received treatment with aminopenicillins within 48 hours of final susceptibilities resulting will be the included population. Patients with the following will be excluded: asymptomatic bacteriuria, indwelling urinary catheter or stent, evidence of an upper UTI including pyelonephritis, bacteremia, fever, history of an anaphylactic penicillin allergy prior to the clinical encounter, a secondary infection in which aminopenicillin monotherapy would be inappropriate, and anatomical abnormality of the urinary tract.

The primary outcome will be the percentage of encounters with appropriate aminopenicillin usage pre vs post implementation. Hospital site, provider type, and service of the ordering user will be collected and analyzed to identify any significant patterns.

Result (pending)

Conclusions (pending).