

2019
Abstracts

MANAGEMENT OF OPIOID WITHDRAWAL WITH PROTOCOL-BASED TREATMENT AT HUNTINGTON HOSPITAL

Amerkhanian H*, Pasternak A, Kirane HD

Huntington Hospital, Huntington, NY 11743

Background: At Huntington Hospital, there was no standard way of treatment for opioid withdrawal prior to the implementation of our new guideline on 9/1/2018. Northwell Health Opioid Management Steering Committee – Behavioral Health/Addiction Protocols workgroup developed this guideline to standardize and improve opioid withdrawal treatment. This guideline was implemented at Huntington Hospital with a goal to adapt it across the Northwell Health system. With a tapered schedule of buprenorphine-naloxone or methadone and with allotted ‘as needed’ doses, the management and transitioning of patients is expected to improve.

Objective(s): This study aims to understand if protocol-based treatment is effective to manage opioid withdrawal. Efficacy is determined with length of stay and readmissions.

Methods: In the retrospective arm, patients who were admitted 2/1/17 to 8/31/18, with an ICD-10 diagnosis of opioid withdrawal are assessed, and patients who were treated with either buprenorphine-containing agents, methadone, or clonidine are being reviewed to determine the length of stay and readmissions of patients who were diagnosed with opioid withdrawal. In the prospective arm, patients who are treated with the new opioid withdrawal tapers from 9/1/18 to 3/31/18 are being assessed to determine if their length of stay and/or readmissions improve.

Results/Conclusions: From 2/1/17 to 8/31/18, 8 patients were coded with an ICD-10 diagnosis for opioid withdrawal at Huntington Hospital, and 136 patients took either a buprenorphine-containing agent (n=21), methadone (n=31), or clonidine (n=84) and are currently being reviewed to assess their indications. *These sections are in progress; a finalized abstract will be submitted following the conference.*

PHARMACIST-LED PROSPECTIVE CULTURE REVIEW PROGRAM FOR CRITICAL MICROBIOLOGY RESULTS IN AN EMERGENCY DEPARTMENT

Andrade J*, Ciaramella C, Truong J

The Brooklyn Hospital Center, 121 Dekalb Avenue, Brooklyn, NY 11201

Background: There is currently limited published data for a pharmacist-led microbiology culture review program through a collaborative drug therapy management (CDTM) agreement in the emergency department (ED). The increase of multi-drug resistant organisms may be mitigated by establishing antimicrobial stewardship for patients discharged from the ED. One way this could be accomplished is by implementing an ED program that expands the role of the emergency medicine pharmacists to provide antimicrobial recommendations for critical microbiology culture results [i.e. extended-spectrum beta-lactamases (ESBL), methicillin-resistant staphylococcus aureus (MRSA), and vancomycin-resistant enterococcus (VRE)].

Objective(s): To assess the impact of a pharmacist-led culture review program for critical microbiology cultures for ED discharged patients through a CDTM agreement on ED revisit rates.

Methods: This study is an institutional review board-approved retrospective pre- and post-implementation comparison of outcomes 12 months before and four months after implementation of the program. Inclusion criteria will be patients at least 18 years of age, confirmed positive microbiology culture of ESBL, MRSA, or VRE of any site, and discharged from the ED. The primary outcome will be 30-day ED revisit rate due to the same complaint as the initial visit. Secondary outcomes will be antimicrobial resistance patterns based on culture susceptibility data, appropriateness of antibiotic therapy based on susceptibility data defined as a discharge antimicrobial agent that was resistant to the microorganism, and time from when culture became positive to pharmacist review. Statistical analysis will be descriptive for all outcomes except Chi-square test for ED revisit rate.

Results: In progress

Conclusions: In progress

EVALUATION OF SACUBITRIL/VALSARTAN UTILIZATION IN A TEACHING HOSPITAL

Auditore B*, Caraccio T, Gubernikoff G

NYU-Winthrop Hospital, 259 1st St, Mineola, NY 11501

Background: Hospital readmissions remain an important challenge in the treatment of heart failure(HF). Nearly 25% of patients are readmitted within one month of hospitalization. Sacubitril/valsartan is currently recommended as first line of Heart Failure.

Objectives: To evaluate the prescribing, adverse events, effects on renal function, and patient outcomes of sacubitril/valsartan. To identify possible areas of improvement in the prescribing of sacubitril/valsartan and evaluate volume status at time of initiation.

Methods: This is an open label, unblinded, retrospective chart review. The following was collected: patient age, gender, length of stay, reason for admission, dose of sacubitril/valsartan, prior dosing of ACEI/ARB if applicable, any adverse events caused by sacubitril/valsartan, blood pressure, and ejection fraction. If available, renal function, time since original sacubitril/valsartan initiation, appropriate titration of dose, and readmission rates will also be collected.

Results: Fourteen (48%) patients were readmitted due to HF exacerbation, 11.5% of patients were readmitted within 30 days. Ten (34%) patients experienced hypotension that required a dose to be held. Five patients were increased on diuretic dosing regimen post initiation of treatment. Four of the 12 were initiated while euvolemic . Average initial creatinine clearance(CrCl) was 44.51 mL/min for patients initiated. Average CrCl post treatment was 41.43 mL/min.

Conclusion: Further education is needed regarding: Lack of evidence in support of once daily dosing of sacubitril/valsartan. Correct initiation dosing of sacubitril/valsartan based on previous ACEI/ARB dosing. Additional research is needed to assess the effects of sacubitril/valsartan on concomitant diuretic dosing. Incidence of diuretic dose increase may be due to volume status during initiation.

PROSPECTIVE COHORT STUDY ASSESSING THE IMPACT OF AN IMMUNOTHERAPY EDUCATIONAL VIDEO

Barsoum M*, Lee C, Devoe C, Seetharamu N, Cruz J

Long Island Jewish Medical Center 270-05 76th Ave, New Hyde Park, NY 11040

Background: Immunotherapy has become the new standard of care for many cancers and has shown to provide benefit in many patients, as well as extensive side effects including GI, dermatologic and endocrine changes. Due to the large volume of patients receiving immunotherapy, it is currently not feasible to provide constant additional education by a pharmacist to each patient.

Objective(s): The purpose of this project is to create a short educational video on immunotherapy, which will help reinforce education provided by the physician and provide additional information to patients on how immunotherapy works, potential side effects of immunotherapy and how to manage those side effects.

Methods: This is an institutional review board approved prospective cohort study being conducted at Monter Cancer Center. Patients who are 18 years or older, speak English and are receiving immunotherapy will be included. One hundred new patients will answer a pre-survey to assess baseline knowledge, watch a short educational video and then answer a post-survey to assess improvement in knowledge base. A paired T-test will be used to compare the survey responses; each patient will serve as their own control. The primary endpoint of this study is to assess the difference in knowledge before and after watching an educational video on immunotherapy. The secondary endpoint is to assess the need for further development of educational videos to improve patient adherence and outcomes to therapy.

Results: In progress

Conclusions: In progress

FEASIBILITY OF OMITTING PREMEDICATIONS FOR WEEKLY PACLITAXEL STARTING THIRD INFUSION

Beall C*, Yum K, Kim S

The Mount Sinai Hospital, 1 Gustave L. Levy Pl, New York, NY 10029

Background: Paclitaxel-based chemotherapy regimens are a central component of breast cancer treatment. Paclitaxel is associated with a high rate of hypersensitivity reaction, owing to Cremophor EL, a vehicle, included as a solubilizing agent in paclitaxel formulation. While standard premedication for every 3 weekly paclitaxel include diphenhydramine, H-2 blocker, and corticosteroid, limited published data support the use of fewer premedication for weekly paclitaxel. Since the risk of paclitaxel-associated hypersensitivity reactions is the highest during the first and second infusion, we sought to assess the feasibility of omitting premedication for weekly paclitaxel regimens in patients who tolerated well the first 2 prior weekly infusions.

Objective: The primary endpoint is to assess the incidence of hypersensitivity reactions in patients who received paclitaxel without pre-medication prior to the third and subsequent doses. Secondary endpoints include overall incidence of hypersensitivity reactions in both the treatment and control arm, cycle in therapy that the reaction occurred, and the interventions performed, including rescue medications administered.

Methods: A single-center, retrospective observational study of stage I-IV breast cancer patients who received treatment with weekly paclitaxel in the breast cancer clinic from March 2017 to June 2018. Patients will be included in the treatment arm if they did not develop hypersensitivity reaction with their first two doses of paclitaxel and all 3 premedications were omitted starting with third dose of paclitaxel. Patients will be assessed for hypersensitivity reactions during and after their paclitaxel infusion.

Results: In progress

Conclusion: In progress

COST COMPARISON OF TROUGH- VERSUS AUC-BASED VANCOMYCIN MONITORING FOR MRSA BACTEREMIA

Beccari MV*, Seabury R, Kufel W, Mogle B, Miller C, Probst L, Steele J

Upstate University Hospital, 750 East Adams Street, Syracuse, NY 13210

Background: It is anticipated that the updated vancomycin monitoring guidelines will recommend area under the curve (AUC)-based monitoring in lieu of trough-based monitoring for methicillin-resistant *Staphylococcus aureus* (MRSA) infections based on evidence suggesting improved clinical outcomes. AUC can be estimated using two steady state serum concentrations and the use of pharmacokinetic equations or by Bayesian modeling. Our institution estimates AUC using two-point pharmacokinetics. The cost of monitoring may influence the decision to implement AUC-based monitoring, and ultimately the monitoring strategy employed at institutions. Data on the cost of AUC-based monitoring compared to trough-based monitoring are lacking.

Objective: To compare the total vancomycin drug and monitoring cost for patients with MRSA bacteremia who received trough- or AUC-based monitoring.

Methods: This will be a single-center, retrospective cohort study comparing the vancomycin drug and monitoring cost between trough- and AUC-based monitoring for patients treated for MRSA bacteremia between May 1, 2013 to December 31, 2018. This includes an 8-month washout period between trough- and AUC-based monitoring at our institution. The primary outcome will be the aggregate cost of vancomycin per day, which will include the cost associated with sample collection (i.e. supply cost and nursing time), sample analysis (i.e. assay cost and laboratory technician time), result interpretation (i.e. pharmacist time), and vancomycin administration (cost of total administered vancomycin dose) during the hospitalized treatment course. All costs will be expressed as cost incurred to the hospital. Our Institutional Review Board granted this study exempt.

Results: Results pending.

Conclusions: Conclusions pending.

UTILIZATION OF A NOVEL SUBCUTANEOUS INSULIN ORDER SET

Begnoche B*, Baron S, Cregin R

Montefiore Medical Center, 111 E 210 Street, Bronx, NY 10467

Background: Current practice demonstrates the prescribing of subcutaneous insulin for glycemic control during inpatient stays is varied and lacking in standardization from medical center to medical center, often within the same hospital. Resultant HYPERglycemia and HYPOglycemia are associated with adverse patient outcomes and increased hospital stay. Despite the existence of guidelines to assist in the proper ordering and monitoring of subcutaneous insulin regimens, they are often prescribed according to clinician preference and without the achievement of glycemic target goals. This study will look at the clinical benefit of the implementation of a subcutaneous insulin order set and the rates of utilization during implementation.

Objective: The objective of this study is to determine the utilization and clinical benefit of a newly implemented subcutaneous insulin order set.

Methods: A standardized order set for subcutaneous insulin was created to facilitate the ordering of insulin, point-of-care glucose testing, and hypoglycemia protocols with the intention of improving blood glucose control. The order set was embedded in our computerized prescriber order entry (CPOE); however prescribers were not mandated to utilize it as the individual components were still available for ordering. Rates of HYPERglycemia, HYPOglycemia, and days at targeted blood glucose goal, and utilization of hypoglycemia protocol compared between treatment groups (therapy ordered with/without the order set) demonstrate a clinical benefit on patient outcomes.

Results: In progress.

Conclusion: In progress.

IMPACT OF PROLONGED VENOUS THROMBOEMBOLISM PROPHYLAXIS FOLLOWING HOSPITAL DISCHARGE ON 30-DAY HEMOSTATIC OUTCOMES FOLLOWING RENAL TRANSPLANTATION IN PATIENTS WITH IDENTIFIABLE HYPERCOAGULABLE RISK FACTORS

Behbahani V*, Santeusanio A, Ames S, Shapiro R

The Mount Sinai Hospital, One Gustave L. Levy Place, New York, NY 10029

Background: Numerous hypercoagulable states have been identified through laboratory testing that place patients at greater risk for thrombotic complications, however, the management of these patients following renal transplantation remains poorly defined. This study compares a strategy of prolonged venous thromboembolism (VTE) prophylaxis to standard therapy with aspirin alone with regards to clinically significant bleeding and thrombotic events.

Objective: The co-primary endpoints for this study were clinically significant bleeding or, VTE by computed tomography or Doppler ultrasound within 30 days of transplant. Patients were excluded if they had a history of cancer, known cirrhosis, were on anticoagulation prior to admission, or had an index hospital stay longer than 10 days

Methods: This was a single-center, retrospective cohort analysis that included isolated, adult renal transplant recipients transplanted between January 2014 and January 2018 with at least one identified hypercoagulable state. Patients were analyzed in two groups based on their outpatient post-transplant VTE prophylactic regimen, which consisted of either aspirin alone (ASA) or aspirin in combination with an anticoagulant (ASA+AC), most commonly enoxaparin 1mg/kg.

Results: A total of 77 patients (ASA n=52, ASA+AC n=25) were included in the study. There were no significant differences between the ASA and ASA+AC treatment arms two groups with regards to incidence of clinically significant bleeding (15.4% vs. 4%, p=0.15) or imaging confirmed VTE (3.8% vs. 0%, p=0.35).

Conclusion: There were no differences in the incidence of clinically significant bleeding or image confirmed VTE between ASA or ASA+AC within 30 days of transplantation.

IMPACT OF COMBINATION ANTIBIOTIC BAG (CAB) ON CLINICAL OUTCOMES IN EMERGENCY DEPARTMENT
PATIENT WITH SEVERE SEPSIS OR SEPTIC SHOCK

Blow C*, Miller C, Darko W, Probst L, Seabury R

Upstate University Hospital, 750 East Adams Street, Syracuse, NY 13201

Background: Our institution has recently published our experience with a combination antibiotic bag (CAB) containing cefepime 2 g and vancomycin 1 g in 1000 mL of sodium chloride 0.9%. In brief, we found the CAB improved institutional compliance with Surviving Sepsis Campaign (SSC) recommends for crystalloid and antibiotic administration. Though pertinent, the SSC recommendations serve as a clinical outcomes surrogate and actual clinical outcomes data would better describe CAB effectiveness.

Objective: To assess CAB effect on clinical outcomes versus non-CAB treatment in emergency department (ED) patients with severe sepsis or septic shock.

Method: Retrospective chart review of ED patients administered at least two antibiotics for severe sepsis or septic shock between January 2016 and September 2016. Primary outcome will be days alive and free of vasopressors. Secondary outcomes will be 14-day survival, survival to intensive care unit (ICU) discharge and proportion of vasopressor free days while in the ICU. This project was given exemption from institutional review board review.

Results: Pending

Conclusions: Pending

PHARMACY RESIDENT COLLABORATION WITH AN INTERDISCIPLINARY TEAM: EFFECTS ON WORKFLOW IMPROVEMENT IN AN ONCOLOGY CLINIC

Boateng E*, Lao P, Sloane S, Nguyen T,

BronxCare Health System Department of Pharmacy, Bronx, NY 10457

Background: The number of new cancer cases in the United States is expected to rise over the years. Our oncology clinic infusion workload has steadily increased causing imbalances in the chemotherapy infusion schedule. This leads to longer wait times and a disruption in workflow. Without compromising safety and efficacy of chemotherapy, some patient's regimens were rescheduled. This requires clinical knowledge on chemotherapy, neutropenia risk, and need for growth factor injections. Pharmacists are well trained to utilize their clinical knowledge and communication skills to coordinate with Oncologists and other staff on the distribution of scheduled infusions.

Objective: To decrease variability for scheduled infusions between October 1st – December 31st 2018 compared to July 1st – September 30th 2018.

Methods: This is a retrospective, chart review, single center study including patients scheduled to receive chemotherapy infusions between July 1st – December 31st. Number of daily scheduled chemotherapy infusions were collected and compared for variability between each day on a line graph. This research was approved by the Institutional Research Board.

Results: The variability of scheduled infusions may have been less in the months of October 1st – December 31st 2018 after involvement of the pharmacist in the scheduling process. Future studies should include statistical analyses to determine the significance of this finding and the impact of infusion times on the results.

Conclusions: Involvement of the pharmacist in the scheduling of patients receiving chemotherapy infusions may reduce variability and imbalances in the schedule.

INTRAPULMONARY SHUNTING SECONDARY TO INTRAVENOUS NICARDIPINE IN POST-OPERATIVE CARDIAC SURGERY PATIENTS: A RETROSPECTIVE STUDY

Bucci, N*, Palat, D, Nerney, L, Passero, B

Albany Medical Center, Albany, NY 12208

Background: Vasoconstriction of pulmonary vasculature is a physiologic response to hypoxia in poorly ventilated lung regions. Theoretically, nicardipine could cause vasodilation and subsequent increased blood flow through these regions, resulting in oxygen desaturation. This is referred to as intrapulmonary shunting. To date, one lung transplant case exemplified worsening respiratory failure due to intravenous nicardipine. No literature regarding this phenomenon in post-cardiac surgery patients has been published to our knowledge.

Objective: Determine if nicardipine use is associated with changes consistent with intrapulmonary shunting in post-cardiac surgery patients.

Methods: An IRB-approved retrospective chart-review of cardiac surgery patients from 2016 to 2018 who received intravenous nicardipine was performed. The primary outcome was the presence of intrapulmonary shunting defined by specific criteria, within one hour of initiation or dose escalation and resolution upon discontinuation. Patient demographics, and pre-existing morbidities were collected to determine risk factors. Results were analyzed utilizing Chi-Square and Fisher Exact probability testing.

Results: A total of 181 cardiac surgery patients who received intravenous nicardipine were reviewed. Based upon clinical criteria, intrapulmonary shunting occurred in 22 of 181 (12.2 %) patients. Risk factors associated with intrapulmonary shunting in those receiving nicardipine included obesity (RR 2.41 CI 1.16-4.5, $p < 0.033$), obstructive sleep apnea (RR 2.12 CI 1.22-3.67, $p < 0.028$), and Type A aortic dissection surgery (RR 4.52 CI 1.62-12.58, $p < 0.011$).

Conclusions: Intrapulmonary shunting secondary to intravenous nicardipine in post-operative cardiac surgery patients is not rare. Additional monitoring should be exercised when using nicardipine in this setting.

IMPACT OF A SECOND, REVISED PHASE OF AN OUTPATIENT PHARMACIST TRANSITION OF CARE PILOT PROGRAM ON PATIENT OUTCOMES

Cardinal C*, Slazak E, Will S, Prescott W, Doloresco F, Jacobs D

General Physician P.C. 705 Maple Road, Williamsville, NY 14221

University at Buffalo Kapoor Hall 3435 Main Street, Buffalo, NY 14214

Background: In a patient-centered medical home, a second phase pharmacist-driven transition of care (TOC) program was created to bridge the gap between hospital discharges and primary care provider (PCP) follow-up appointments. Patients who had at least two of the refined criteria were sent to the clinical pharmacy team for consultation: CPC+ score of “high,” fifteen or more scheduled medications, two or more medication discrepancies, and/or hospitalized for chronic obstructive pulmonary disease exacerbation, pneumonia, heart failure, atrial fibrillation, or coronary artery disease.

Objective: The primary outcome was assessing the difference in 30-day readmission rates between the first and second phases of the TOC pilot program.

Methods: This is a retrospective chart review to evaluate the effectiveness of a second phase TOC pilot program on 30-day readmission rates compared to the first phase. After a patient is referred, the TOC pharmacist contacts them via telephone or face-to-face visit to review medication discrepancies, evaluate adherence, and counsel on discharge regimen. Interventions aimed at medication optimization are then recommended to the patient’s PCP in advance of the patient’s follow-up visit.

Results: Pending

Conclusions: Data from the second phase will be collected and compared to pilot data pending institutional review board approval, which is currently in progress. The intent of undergoing multiple phases within this TOC program is to continue to monitor the program’s outcomes to assess the need for further adjustment in referral criteria. This will ultimately identify the patient population where pharmacists can have the greatest impact on transitions of care within an ambulatory care setting.

IMPLEMENTATION OF A CENTRALIZED ORDER SET IN EPIC TO ACHIEVE TARGET RASS SCORES AND IMPROVE SEDATION IN THE ICU: A QUALITY IMPROVEMENT PROJECT

Chacko J*, Goriacko P, Khalique S, Chen J, Ferguson N

Montefiore Medical Center, 111 East 210th Street, Bronx, NY 10467-2490

Background: The Richmond Agitation-Sedation Scale (RASS) is used to carefully titrate sedation of critically ill patients and prevent negative consequences associated with under-sedation and over-sedation. Montefiore Medical Center implemented a centralized order set for sedation in April 2018 to decrease inappropriate sedation defined as conflicting RASS goals, discrepancies between ordered RASS goals and documented scores, and lack of RASS score documentation by nursing. This quality improvement project aims to evaluate the effectiveness of a multi-component, centralized order set in obtaining target sedation goals.

Objective: The primary outcomes are the percent of patients with conflicting sedation goals ordered and the percent of discrepancies between the ordered sedation goal and documented RASS scores. Secondary outcome is the number of patients with target RASS documentation (at least every 2 hours per protocol).

Methods: This retrospective, observational study is approved by our ethics committee and informed consent from subjects is not required. The aim of the study is to evaluate the effectiveness of the implemented order set over a 16-week period, from February 2018 to June 2018. Patients enrolled are at least 18 years of age and received sedation in a medical or surgical intensive care unit (ICU). Patients in the neurological ICU or admitted for cardiothoracic surgery will be excluded. Medications analyzed include: midazolam, fentanyl, propofol, and dexmedetomidine as a single or combination agent. Ten patients will be randomly sampled each week for eight weeks during the pre-implementation phase and eight weeks during the post-implementation phase.

Results: Pending

Conclusions: Pending

EVALUATION OF PHARMACISTS' IMPACT IN PERFORMING MEDICATION RECONCILIATION DURING TRANSITIONS OF CARE FROM HOSPITAL DISCHARGE TO POST-ACUTE CARE FACILITIES

Chen, M*, Shen M, Gomolin I, Sahansra S, Akerman M

NYU Winthrop Hospital, 259 1st Street, Mineola, NY 11501

Background: Patients have an increased risk for medication discrepancies during transitions between healthcare settings. This is particularly true in patients who are discharged from hospital to post-acute care facilities (PAC), as these patients generally have several medical comorbidities and associated medications, and are seen by additional healthcare providers before returning to their usual treating physicians. Medication reconciliation is a necessary intervention to identify discrepancies and prevent harm during these transitions.

Objective: Primary outcome was number of interventions identified. Secondary outcomes were types of intervention and acceptance rate by medical providers.

Methods: Clinical pharmacists reviewed the discharge medication orders for patients who were discharged from hospital to an affiliated PAC and performed medication reconciliation. Pharmacotherapeutic interventions were communicated to the medical team and documented in electronic medical record. Interventions were classified into types of intervention, phase of care, drug category, and acceptance rate by the medical team.

Results: 105 patient records were reviewed and 44 (42%) potentially adverse medication outcomes were identified. 14% of interventions were drug-drug interactions, 16% were therapeutic duplication, 32% were dose clarification, 34% were medication omission, and 4% were medication commission. Of 44 recommendations, 82% were accepted by the medical team, 11% were not, and in 7% we could not ascertain the effect of recommendation.

Conclusion: Our study found that clinical pharmacists can play an essential role during the transition of patients from the hospital to PAC by performing medication reconciliation, resulting in a decrease of potential adverse medication outcomes.

EFFECT OF VANCOMYCIN AND PIPERACILLIN-TAZOBACTAM COMBINATION THERAPY ON THE INCIDENCE OF ACUTE KIDNEY INJURY

Cheung N*, Zipperlen C, Li J, Danaher K, Gilbert G

South Nassau Communities Hospital, One Healthy Way, Oceanside, NY 11572

Background: Recent studies have reported an association between vancomycin and piperacillin-tazobactam combination therapy and an increased risk for nephrotoxicity. However, these studies had limitations, including variable vancomycin exposure, vancomycin levels prior to acute kidney injury, nephrotoxic drug exposure, and definitions of acute kidney injury.

Objective: The primary objective is to assess the incidence of acute kidney injury in adult patients who receive concomitant vancomycin and piperacillin-tazobactam therapy compared to monotherapy.

Methods: This retrospective matched, non-blinded cohort study was approved by the institutional review board. Inclusion criteria involved any patients age greater than eighteen with vancomycin and piperacillin-tazobactam combination or monotherapy of either antibiotic for at least 48 hours, and serum creatinine levels resulted within 24 hours of antibiotic initiation and throughout therapy. Exclusion criteria were patients with cystic fibrosis, pregnancy, history of chronic kidney disease stage 3 or higher, structural kidney disease, chronic renal replacement therapy prior to admission, acute kidney injury present upon admission, and supra-therapeutic vancomycin troughs greater than 20 mg/L prior to acute kidney injury without vancomycin dosing adjustments. Acute kidney injury was defined using the Acute Kidney Injury Network criteria. Data collected from the electronic medical record excluded patient identifiers and included patient demographics, medical diagnosis, medication order details, relevant laboratory results, and clinical outcomes.

Results: Results pending

Conclusions: Results pending

EVALUATING SYSTEMIC VANCOMYCIN EXPOSURE USING TROUGH-GUIDED TREATMENT IN HOSPITALIZED PATIENTS

Chin T*, Yassin A, Meleshkina D, Farkas A

Mount Sinai West Hospital, 1000 10th Avenue, New York, NY 10019

Mount Sinai St. Luke's Hospital, 1111 Amsterdam Avenue, New York, NY 10025

Background: A trough-guided approach for vancomycin dosing rests on the assumption that trough levels are adequate surrogate markers for area under the concentration time curve (AUC). Recent studies have shown that serum trough levels alone are suboptimal for assessing efficacy and safety. This study describes the attainment of vancomycin pharmacodynamic targets for efficacy and nephrotoxicity during current trough-guided clinical care.

Objective: The primary outcome was vancomycin systemic exposure described by 24-hour AUC.

Methods: This retrospective, bi-center, observational study was approved by the health system Institutional Review Board. Using Bayesian feedback to fit population-based models to patient concentration levels, individualized pharmacokinetic parameters were estimated. The AUC was used to determine treatment effectiveness and safety.

Results: Fifty patients were analyzed with 402 serum measurements. A majority of patients were admitted to the ICU (56%) and the median baseline creatinine clearance was 48.3 mL/min. The median vancomycin dose was 2000 mg/day or 23.2 mg/kg/day. A mean daily AUC ≥ 400 mg*h/L was achieved by 78% of patients with 40% of patients achieving this target on day 1 of therapy, 58% on day 2, 68% on day 3, and 86% on day 5. Regarding safety, an AUC ≤ 625 mg*h/L was achieved in 98% of patients on day 1, 87% on day 2, 84% on day 4, and 58% on day 5.

Conclusions: Current trough guided vancomycin dosing frequently results in an AUC in excess of the efficacy target. Development of a dosing strategy to optimize AUC target attainment will be further investigated.

EFFICACY OF THE THREE-DOSE HEPATITIS B VACCINE: REAL WORLD DATA

Chiu B*, Lee S, Bernstein D, Ahn S

North Shore University Hospital, 300 Community Drive, Manhasset, NY 11030

Background: Hepatitis B virus (HBV) infection is a major global health problem that increases morbidity and mortality from complications such as liver cirrhosis and hepatocellular carcinoma. While universal childhood vaccination has reduced the HBV infection incidence, the overall prevalence remains high in adults. The burden can be attributed to decreased immunogenicity of hepatitis B vaccines, associated with advanced age, men, obesity, smokers, and diabetes. Existing clinical trial data of the vaccines show high seroprotection rates (SPR). The objectives of this study are to evaluate the real world efficacy and adherence of the three-dose hepatitis B vaccination.

Objective: The primary outcome is the SPR, which is the percentage of patients with antibodies to the hepatitis B surface antigen (anti-HBs) greater than or equal to 12 mIU/mL or a reactive anti-HBs reading, after one, two, or three doses of the primary series. Secondary outcomes include the rate of completion of the primary series.

Methods: Our single-center, retrospective, observational, chart review study assessed men and women 18 years and older who received hepatitis B vaccination. Patients were excluded if they received 4 or more doses of hepatitis B vaccine, were pregnant or breast feeding, had acute or chronic hepatitis B infection, received any double-dose, or received initial doses outside of the clinic. This study was Institutional Review Board exempt.

Results: Results pending.

Conclusions: By comparing SPRs at our hospital to existing clinical trial SPRs, we aim to further identify and develop strategies to manage patient populations at risk for HBV infection.

FENTANYL COMPARED TO HYDROMORPHONE FOR ANALGOSEDATION: A BEFORE AND AFTER STUDY

Choi H*, Altshuler J, Radparvar S

The Mount Sinai Hospital, 1 Gustave Levy L. Place, New York, NY 10029

Background: The 2018 Society of Critical Care Medicine guidelines on the “Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU” advocate for protocol-based analgo-sedation practices due to favorable outcomes in reducing sedative requirements, duration of mechanical ventilation, intensive care unit (ICU) length of stay, and pain intensity. However, specific recommendations on the optimal analgesic to use are lacking. Previous studies observed that differing pharmacokinetics between analgesics favored analgesics with a rapid onset and offset due to ease of titration. Currently, there are no studies specifically comparing hydromorphone and fentanyl for use in this setting. The purpose of this study is to compare the use of hydromorphone versus fentanyl for analgo-sedation practices given the differing pharmacokinetics between the two agents.

Objective: The primary endpoints include ICU length of stay and time on mechanical ventilation. Secondary endpoints include percentage of time within sedation scale goal, percentage of time the patient is Confusion Assessment Method for the ICU (CAM-ICU) positive, hypotensive events, constipation, self-extubation, need for restraints, and percentage of time that the Critical-Care Pain Observation Tool (CPOT) is greater than 2.

Methods: This is a single-center, retrospective cohort review of adult patients admitted to the medical ICU, surgical ICU, or cardiac ICU who received continuous fentanyl between April 1, 2017 to December 31, 2018 or continuous hydromorphone between January 1, 2018 and August 1, 2018.

Results: In progress

Conclusions: In progress

POSTOPERATIVE PAIN CONTROL IN THORACIC SURGERY PATIENTS: IMPLEMENTING AN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL

Chu R*, Shen M, Kundra A, Spier L, Patel A, Mitzman B

NYU Winthrop Hospital, 259 1st Street, Mineola, NY 11501

Background: Thoracic surgery patients undergo painful procedures including surgical manipulation, chest tube insertion, and are at risk for post-thoracotomy pain syndrome. Traditionally, opioid analgesics from patient-controlled analgesia (PCA) devices are used for postoperative pain management but may still precipitate side effects like constipation and respiratory depression. A multidisciplinary team of healthcare providers created a non-opioid multimodal analgesic protocol for perioperative thoracic surgical patients undergoing minimally invasive major lung resection. Several studies have shown adequate patient comfort with multimodal analgesic regimens in thoracic surgery patients and a financial benefit to the hospital. This study aims to evaluate analgesic effect, length of stay, patient outcomes, and side effects in thoracic surgery patients on either PCA or multimodal analgesic regimen.

Objective: The primary outcome was patient pain scores and total narcotic usage in the perioperative and postoperative phase (calculated as total morphine milligram equivalents). Secondary outcomes included length of stay, time to first ambulation postoperatively, total cost of medications, total cost of hospital admission, and surgery-related complication (bleeding, pneumothorax, pleural effusion, respiratory failure, death).

Methods: Patients were evaluated in a retrospective manner to a cohort of historical patients undergoing the same procedure that received the previous conservative regimen that focused on opioid analgesia through PCA. Prescribers were surveyed to identify barriers contributing to inappropriate prescribing of the ERAS protocol. Feedback from the surveys is being incorporated at this time.

Results: Results pending.

Conclusions: The implementation of an ERAS protocol has begun and has since encountered barriers that have limited prescribing. The results of this study are still pending.

PHARMACY DIRECTED INSULIN PROTOCOL IN NON-CRITICALLY ILL HOSPITALIZED PATIENTS

Cirbus K*, Zalenski M, Vink T

Mercy Hospital of Buffalo, Buffalo, NY 14220-2039

Background: The American Diabetes Association and the American College of Clinical Endocrinology recommend inpatient blood glucose (BG) levels be below 180mg/dL. Utilizing a basal-nutritional-correctional insulin protocol has shown improved glycemic control amongst non-ICU patients. Partnership for Patients is an initiative that focuses on decreasing hospital acquired conditions and readmissions across New York State. This program focuses on ensuring that less than 20% of patients per month have a BG reading ≥ 200 mg/dL.

Recent results conclude that 24% of patients at Mercy Hospital of Buffalo experience

BG levels ≥ 200 mg/dL.

Objective(s): The primary outcome is the percentage of mean BG readings between 70-180 mg/dL under pharmacy services. Secondary outcomes include: mean BG per patient, mean BG < 70 mg/dL, and < 40 mg/dL.

Methods: This study is approved by the Institutional Review Board. At the provider's discretion, patients will be started on an insulin regimen. BG monitoring will be ordered. After 24-hours inpatient, and with at least 2 BG levels ≥ 200 mg/dL, the clinical pharmacist will approach the provider to recommend an alternative insulin regimen that includes: weight based basal and nutritional insulin, with a low, moderate, or high dose correctional insulin. The pharmacist will monitor the patient's BG throughout the hospital stay, recommending adjustments as needed. The following data will be collected: age, sex, race, BMI, SCr, A1c, steroid use and diagnosis of type II diabetes mellitus. Data will be retrospectively compared to a control group that did not include pharmacy intervention.

Results: results pending

Conclusion: conclusion pending

IMPACT OF A PHARMACIST-DRIVEN INTRAVENOUS TO ORAL ANTIBIOTIC CONVERSION PROTOCOL FOR GRAM-NEGATIVE BACTEREMIA

Ciriello DN*, Danek M, Voigt L, Thomas S

Buffalo General Medical Center, 100 High Street, Buffalo, BY 14203

Background: Gram-negative blood stream infections have traditionally been treated with intravenous (IV) antibiotics, but controversy arises whether IV antibiotics are necessary for the entire treatment duration. An IV to oral conversion protocol was implemented at Buffalo General Medical Center in February 2019 for patients with a gram-negative bacteremia secondary to a urinary tract infection (UTI). Prior analysis demonstrated that these patients are being converted to oral therapy but not until the time of discharge.

Objective: The primary outcome was to evaluate the number of IV antibiotic days before and after implementation of the protocol. Secondary outcomes included length of stay, de-escalation of therapy as appropriate, 30 day infection-related hospital readmission rate, change in antibiotic therapy, and positive blood cultures after the initiation of oral therapy.

Methods: This was a retrospective, single-center, observational cohort study to assess the new IV to oral conversion protocol at Buffalo General Medical Center. Patients with a gram-negative bacteremia with the source being from the urinary tract were included in the analysis. This was confirmed with a positive blood and a positive urine culture from the same gram-negative organism. Patients with kidney stones, a spinal cord injury, chronic indwelling urinary catheter, nephrostomy tubes, urinary stents, transplanted organs, or bladder cancer were excluded. Patients also receiving antibiotics for a non-UTI indication were excluded. Charts will be reviewed based on the list supplied by information technology and data will be collected for all eligible patients.

Results: Results pending

Conclusions: Results pending

TRANSITIONAL CARE ANTIMICROBIAL STEWARDSHIP TO OPTIMIZE TREATMENT DURATION IN PATIENTS DIAGNOSED WITH PNEUMONIA AT A COMMUNITY HOSPITAL

Cizdziel A*, Daigler B, Vink T

Mercy Hospital of Buffalo, 565 Abbott Road, Buffalo, NY 14220

Background: Excessive antimicrobial therapy is associated with increased resistance, *Clostridium difficile* (*C. diff*) infection, and unnecessary costs. Literature suggests that discrepancies exist between discharge regimens and guideline recommendations, especially with regard to treatment duration. The purpose of this study is to assess inpatient and emergency department (ED) pneumonia prescribing to identify opportunities for pharmacist involvement in discharge antimicrobial stewardship.

Objective: The primary outcome was total duration of therapy. Secondary outcomes included appropriateness of antibiotic choice and incidence of *C. diff* diagnosis.

Methods: This was a retrospective, single-center study to assess prescribing practices. The electronic medical record and simple random sampling was used to identify the population treated from 9/1/2017 to 8/31/2018. ED antibiotic doses, inpatient orders, discharge prescriptions, allergies, and *C. diff* diagnoses were collected. Hospital-acquired (HAP) and community-acquired (CAP) was differentiated based on provider documentation. Patients were excluded if they did not receive a full treatment course or antibiotics were for an indication other than pneumonia.

Results: Average therapy duration was 7.97 days in 110 ED patients, with 60% treated for 8 or more days. Levofloxacin was prescribed in 45% of patients. Average therapy duration was 7.73 days in 48 preliminary inpatients, with 46% treated for 8 or more days. The majority empiric regimen for CAP was ceftriaxone plus azithromycin (58.8%) and vancomycin plus piperacillin/tazobactam for HAP (75%). Zero inpatients had a *C. diff* diagnosis.

Conclusions: Based on preliminary results, there is an opportunity to improve compliance with national treatment guidelines in the ED and inpatient through prospective interventions.

IMPACT OF A PHARMACIST MEDICATION EDUCATION PROGRAM ON HOSPITALIZATION AND COST FOR ONCOLOGY PATIENTS

Costa O*, Titus R, Larche N

Canton-Potsdam Hospital, 50 Leroy Street, Potsdam, NY 13676

Background: Oncology patients are at high risk of adverse events from treatments, medication interactions, and complications secondary to cancer. These concerns increase the risk of hospitalization and associated healthcare costs.

Objective: To determine if a pharmacist medication education program can reduce the incidence of hospitalization and associated healthcare costs compared to a control group.

Methods: This was a single-centered, retrospective chart review which was granted exclusionary status for informed consent by the IRB. This study compared stage I and II cancer patients before (control group) to after (study group) initiation of a pharmacist medication education program. Baseline characteristics, incidence of hospitalizations, and hospital financial charges were recorded and analyzed from 7/1/2015 to 6/31/2018. A chi-squared, fisher's exact, and t-test were used to compare baseline characteristics. Hospitalizations and associated healthcare expenditures were analyzed using a chi square and Mann Whitney U test, respectively.

Results: Of 200 patients examined, a total of 62 patients (39 in control group and 23 in control group) were included. Baseline characteristics were similar between groups. When compared to the control group, the study group experienced fewer inpatient admissions (17% vs. 28%, $p = 0.3368$) and lower hospital financial charges per patient (\$5,309 vs. \$7,478, $p = 0.0012$).

Conclusion: This study suggests decreased inpatient admissions and demonstrates significantly lower hospitalization associated financial charges in oncology patients that receive pharmacist medication consultations.

ASSESSMENT OF PHENOBARBITAL IN SEVERE ALCOHOL WITHDRAWAL SYNDROME IN THE CRITICAL CARE UNIT

Daniel G*, Yuen C, Pasternak A, Anderson J

Huntington Hospital, 270 Park Ave, Huntington, NY 11743

Background: The current management of Alcohol Withdrawal Syndromes (AWS) involves using benzodiazepines as first-line therapy, and symptom severity is monitored with the CIWA-Ar (Clinical Institute Withdrawal Assessment for Alcohol-Revised) score. In the Intensive Care Unit (ICU), some patients require dexmedetomidine as adjunctive treatment for hyperactivity symptoms. High cost of dexmedetomidine and its association with increased ICU length of stay (LOS) prompted evaluation of adherence to the alcohol withdrawal protocol and reason for ICU admissions. Phenobarbital has become an attractive option considering its long half-life, ease of administration, smoother withdrawal, and less intense monitoring with the CIWA scale. Multiple studies demonstrate patients with severe AWS are safely treated with phenobarbital monotherapy, offering a safe alternative to benzodiazepines.

Objective(s): To evaluate adherence to the current AWS protocol and the reason for ICU admissions. To evaluate the effectiveness of utilizing phenobarbital in comparison to usual care in patients with severe AWS in the ICU.

Methods: The study consisted of two phases. The phase 1 study was a retrospective analysis of how severe AWS patients are currently managed and adherence to the AWS protocol from May to October 2018. The Phase 2 study was a prospective study that assessed the effectiveness of utilizing phenobarbital in patients with severe alcohol withdrawal that were resistant to benzodiazepines therapy in comparison to usual care. The outcomes were ICU LOS, hospital LOS and incidence of complications.

Results: During phase 1, only 61% of lorazepam dose post-assessments were completed and it took an average of 6.8 hours for the CIWA protocol to be ordered. Phase 2 results are in progress.

Conclusion: In progress

IMPACT ON ELECTRONIC PHARMACY ROUNDING TOOL ON THE PATIENT EXPERIENCE

DeAgresta B*, Bienemann S, Pasternak A

Huntington Hospital, 270 Park Ave, Huntington, NY 11743

Background: CipherHealth© is an electronic rounding tool used by a multidisciplinary team to develop communication and improve patient outcomes. The clinical pharmacists at Huntington Hospital created a Pharmacy Script in CipherHealth© to help improve communication about medications. The Pharmacy Script focuses on two main questions related to HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) survey; do you understand the purpose of your medication and do you understand the side effects of your medication? The patients intervened on were high-risk patients. These disease states include heart failure, pneumonia, stroke and chronic obstruction pulmonary disease (COPD). A LACE score incorporates the length of stay, acute admission to the hospital, comorbidities and number of emergency room visits from the past six months. A patient with a higher LACE score predicts a higher readmission to the hospital.

Objective: The primary objective of implementing this project is to evaluate the interventions a pharmacist can make with the CipherHealth© pharmacy rounding tool. The secondary outcome is to assess the patient understanding of each medication by utilizing the CipherHealth© pharmacy rounding tool. Our goal with implementing this project is to explore how a pharmacist can support the patient by assisting with the transition of care.

Methods: This study was an Institutional Review Board except quality improvement project. Patients who were diagnosed with pneumonia that had a LACE score of ≥ 11 were included. 68 patients were reviewed and 36 medication related interventions were made. The HCAHPS survey is being analyzed.

Results: Results pending

Conclusions: Pending

EVALUATION OF MELATONIN FOR PROPHYLAXIS OF DELIRIUM IN THE INTENSIVE CARE UNIT

DeGelorm A*

Southside Hospital, 301 East Main Street, Bay Shore, NY 11706

Background: Delirium is a nonspecific disorder characterized by impaired cognition that occurs frequently in the intensive care unit. There are no well-established therapeutic strategies for treatment of delirium. Melatonin is a naturally occurring hormone secreted by the pineal gland. Prior studies have associated delirium with low melatonin levels in patients in the intensive care unit. This study was conducted to determine the effect of melatonin administration on the incidence of delirium in the intensive care unit.

Objective: The primary outcome was occurrence of delirium in the intensive care units. Secondary outcomes included duration of delirium and duration of intensive care unit length of stay.

Methods: This was a retrospective, single-center, retrospective chart review to assess the effect of melatonin on delirium in the intensive care unit at Southside Hospital. This study included 2 groups with 150 patients in each (total n = 300). 1 group included patient's receiving melatonin upon admission to one of the intensive care units in Southside Hospital and for the duration of their stay. The control group included patients who were admitted to one of the intensive care units and did not receive melatonin at any point during their stay.

Results: Results pending.

Conclusions: Results pending.

EVALUATING THE PHARMACIST'S ROLE IN PREVENTING RECURRENT HYPOGLYCEMIC EVENTS

Denas J*, Baratt Y, Li D

Mount Sinai Brooklyn, 3201 Kings Highway, Brooklyn, NY 11234

Background: Diabetes is one of the most common chronic diseases in the United States and glycemic control is important to decrease morbidity and mortality. Recurrent hypoglycemia is the most common side effect of insulin therapy which can lead to complications. The purpose of this quality improvement initiative is to determine the impact of pharmacist led intervention on recurrent inpatient hypoglycemic episodes.

Methods: A review of patients admitted to Mount Sinai Brooklyn Hospital who were administered oral glucose gel, dextrose 50% injectable, and/or glucagon was completed. Patients were identified using medication administration reports generated from PRISM. Patients were excluded if they did not receive diabetes medications within 24 hours before administration of rescue agents, if they were part of a resuscitation code, or if they were given insulin as part of the hyperkalemia protocol. Data collected between March and August 2018 served as the control. For the prospective group, the pharmacist conducted interviews with nurses following each hypoglycemic event to collect information to identify areas for intervention in order to prevent recurrent episodes. Information collected included how the event was identified and treated, whether the physician was notified, whether therapeutic recommendations were made, whether there were recent changes in diet/appetite, and why the last dose of insulin was administered. Rates of hypoglycemia recurrence will be analyzed to assess the impact of pharmacist intervention.

Results: Research-in-progress

Conclusion: Research-in-progress

THE ROLE OF PROBIOTICS IN CLOSTRIDIoidES DIFFICILE DISEASE SEVERITY AND TIME TO DISEASE RESOLUTION

Dym S*, Akerman M, Fenner N, Blum S

NYU-Winthrop Hospital, 259 First Street, Mineola, NY 11501

Background: Clostridioides difficile infection (CDI) is the leading cause of hospital-related diarrhea. It accounts for 15,000-30,000 deaths per year in the US and costs approximately \$5 billion annually. The Infectious Disease Society of America (IDSA) guidelines have no recommendations regarding probiotic therapy. There is conflicting data regarding their efficacy and research on the role of probiotics in disease severity is lacking. This group has previously presented data showing increased CDI incidence with probiotics.

Objectives: The primary outcomes were diagnosis of severe CDI, based on IDSA guidelines, and time to disease resolution, defined by time to soft stools.

Methods: This was an IRB approved, single-centered, retrospective cohort analysis. Electronic medical records identifying patients diagnosed with CDI in NYU-Winthrop Hospital between 8/1/15-8/31/18 were reviewed. Clostridioides difficile positive patients were divided into four groups depending on probiotic administration and time of initiation. Patient demographics were collected and patients were evaluated for disease severity according to the IDSA's CDI guidelines. Additionally, we looked at number of loose stools throughout the disease course and time to soft stool.

Results: The preliminary results included 75 patients with CDI, 48 of which were severe. Fifty-two percent of patients were female and mean age was 73.5 years. Patients on probiotics >24 hours prior to CDI diagnosis were significantly more likely to present with severe disease. There was no significant difference in time to disease resolution between those never on probiotics and those administered probiotics.

Conclusions: Preliminary results show the futility of probiotics as adjunctive therapy and possible harm when used prophylactically for CDI.

EXTERNAL VALIDATION OF NOMOGRAM DESIGNED TO PREDICT PSEUDOMONAS AERUGINOSA IN PATIENTS WITH INFECTED FOOT ULCERS

Ejiofor V*, Farkas A, Stavropoulos C

Mount Sinai West Hospital, 1000 10th Avenue, New York, NY 10019

Mount Sinai St. Luke's Hospital, 1111 Amsterdam Avenue, New York, NY 10025

Background: Foot infections caused by *Pseudomonas aeruginosa* (PSA) are frequently resistant to antibiotics, which often leads to the empiric use of broad spectrum antibiotics. In a previous work, a predictive model was developed to help identify patients at risk for foot infections caused by PSA. The purpose of this study is to externally validate the initial model and establish its predictive performance in real life.

Purpose: The primary outcome of this study is to externally validate this initial model using a data set from a similar patient population and to establish the models predictive performance in real life.

Methods: The project has been approved by the Institutional Review Board. This retrospective study included adult patients admitted for foot infections, with positive microbiologic cultures. Demographic characteristics of this data set were compared to the training data set using the chi-squared test and Kruskal-Wallis one-way ANOVA. All statistical analyses were performed using R software.

Results: Included in this study were 100 patients admitted between March 2018 and December 2018; and they were analyzed via retrospective chart reviews. The sensitivity and specificity were 60% and 44%, respectively. The positive and negative predictive values were 16% and 86%, respectively. The discriminative ability of this model, measured by AUROC and Brier score, were calculated to be 0.57 and 0.17, respectively.

Conclusions: The discriminative ability of the nomogram infers that the predictions which are made do not occur by chance alone, but rather are truly those predicted by the nomogram

EVALUATING THE ROLE OF PROCALCITONIN IN ANTIBIOTIC STREAMLINING

Ezzet S, Vo A, Maniara B

Kingsbrook Jewish Medical Center, 585 Schenectady Ave, Brooklyn, NY 11203

Background: Patients are admitted every year for asthma, chronic obstructive pulmonary disease (COPD) exacerbation, or bronchitis. These patients are typically started and continued on broad-spectrum antibiotics for extended durations. Early and accurate differential diagnosis of these infections may reduce unnecessary antibiotic use and duration. Procalcitonin (PCT) levels rise in response to systemic inflammation, particularly in severe bacterial infections. Several clinical trials have demonstrated that acting on PCT analysis can decrease duration of antibiotic use, development of resistance, and cost of care.

Objective: This study aims to evaluate the role of PCT in lower respiratory tract illnesses/infections (LRTI) such as COPD, asthma, bronchitis, and pneumonia (PNA) at Kingsbrook Jewish Medical Center and guide antibiotic appropriateness.

Methods: This study compares antibiotic duration pre- and post-PCT implementation from November 2017 – March 2018 and from November 2018 – March 2019, respectively. We included patients ≥ 18 years old admitted for asthma, COPD, bronchitis, or sepsis secondary to PNA. Patients < 18 years old, or with end-stage renal disease/hemodialysis, trauma/post-surgery, or cardiogenic shock were excluded. Data collected include age, sex, diagnosis, antibiotics administered, duration, comorbidities, length of stay, and readmission. The primary outcome is duration of antibiotics. A secondary outcome is length of hospital stay.

Results: Pending

Conclusion: It is anticipated that this evaluation will provide data that may guide clinicians in determining whether antibiotics should be streamlined in the appropriate setting.

EVALUATION OF A PHARMACIST'S IMPACT ON ANTIMICROBIAL PRESCRIBING IN AN URGENT CARE CENTER

Fabian A*, Linnertz S, Avery L

St. Joseph's Health, Department of Pharmacy, 301 Prospect Ave, Syracuse, NY 13203

Background: The urgent care setting has been identified as a potential opportunity for antimicrobial stewardship. While pharmacists have been shown to positively influence patient care in several other settings, there is not yet evidence analyzing the impact of a pharmacist's presence in urgent care. This project aims to show that pharmacists can reduce inappropriate antibiotic prescribing in this setting.

Objective(s): The primary objective is to determine the compliance with antibiotic prescribing guidelines for the treatment of urinary tract infections (UTIs), skin and soft tissue infections (SSTIs), upper respiratory tract infections (URIs), and lower respiratory tract infections (LRTIs) before, during, and after the presence of an antimicrobial stewardship pharmacist in an urgent care center. Secondary objectives include proportion of patients who were prescribed empiric antibiotics when not indicated, proportion of patients prescribed incorrect empiric antibiotics, proportion of patients who are prescribed an incorrect duration of antibiotics, and proportion of patients who are prescribed an incorrect dosage of antibiotics for the above disease states.

Methods: This is a single-center, retrospective, observational, pre (12/10/18 – 1/6/19), intervention (1/7-2/3/19), and-post intervention (2/4 – 3/3/19) study approved by the institutional review board (IRB) at St. Joseph's Health. All non-pregnant, adult patients 18 and older seen by a provider at the urgent care center with a chief complaint consistent with a UTI, SSTI, URI, or LRTI will be included. Patients being treated for a SSTI involving a bite, wound, or surgical site infection will be excluded.

Results: In progress.

Conclusions: In progress.

PROJECT PACT-STROKE: PHARMACISTS ACT ON CARE TRANSITIONS IN STROKE

Fancher J*, DelVecchio D, Miller C, Phillips L

Upstate University Hospital, 750 East Adams St. Syracuse NY 13210

Background: Stroke is the fifth leading cause of death in the United States and is more disabling than it is fatal. The risk of recurrent stroke is 8-10% during the 7 days post-stroke. Urgent assessment and treatment of such patients can reduce hospital bed-days, acute costs, and 6-month disability. At our institution, patients discharged from the hospital following a stroke are scheduled with the neurology clinic at three months post-stroke. However, it is unclear if these patients would benefit from earlier follow up. A new initiative was implemented which includes timely post-stroke care from a pharmacist within 48-72 hours of stroke and again 30 days after hospital discharge.

Objective: The objective of this study is to evaluate this newly implemented service and determine whether earlier follow-up post-stroke by the pharmacist leads to improved outcomes when compared to the current 90-day standard at our institution.

Methods: This study will utilize a retrospective report of post-stroke patients who were seen by the outpatient neurology clinic three months later. This population will serve as the historical cohort. Another retrospective report will be run on those patients who received the PACT intervention. Data will be collected to evaluate this newly implemented service. Descriptive statistics will include either mean and standard deviation. Inferential statistics will include a student's t-test.

Results: ongoing

Conclusion: ongoing

SAFETY AND EFFICACY OF DIRECT ORAL ANTICOAGULANT (DOAC) THERAPY IN CANCER PATIENTS

Fovel L*, Miller C, Seabury R, Darko W, Probst L, Horvath L

Upstate University Hospital, 750 E. Adams Street, Syracuse, NY 13209

Background: Venous thromboembolism (VTE) is the second leading cause of death in patients with malignancy. The CHEST Guidelines recommend low molecular weight heparin (LMWH) over oral anticoagulation for the prevention and treatment of VTE in cancer patients. Currently there is a lack of data on the safety and efficacy of direct oral anticoagulant (DOAC) therapy in cancer patients.

Objectives: The primary outcome of this study is to determine the frequency of new onset VTE among patients with active cancer on anticoagulation therapy with a DOAC compared to LMWH. Secondary outcomes include the frequency of major or minor bleeding, other thrombotic events, and death in these patients.

Methods: After Institutional Review Board (IRB) exemption, a retrospective review of outpatient records from October 2016 to October 2018 was completed to identify patients with documented cancer diagnosis and either a DOAC or LMWH as a listed medication. Patients were included in the study if they were 18 years of age or older and were on anticoagulation therapy with a DOAC or LMWH for the prevention and/or treatment of VTE. Patients were excluded if they had atrial fibrillation, valvular disease, antiphospholipid antibody syndrome, current pregnancy, BMI >40 or weight >120kg, severe renal or hepatic impairment, or were on concomitant therapy with a significant interacting medication. The outcomes will be analyzed using chi-squared or Fisher's exact test.

Results: Data analysis is ongoing and full results will be presented at NYSCHP Annual Assembly.

Conclusion: Conclusions are forthcoming.

EXCIPIENT EXPOSURE IN CRITICALLY ILL PEDIATRIC PATIENTS

Franco S*, Frye J

Department of Pharmacy, Montefiore Medical Center, Bronx, NY, 10467

Background:

Benzyl alcohol, phenylalanine, propylene glycol, and sunset yellow have been associated with severe adverse effects in pediatric patients and may contribute to overall hospital morbidity.

Objective(s):

The aim of this project is to decrease exposure to these excipients in critically ill pediatric patients by 50% without significantly increasing medication costs. We will also determine if these goals are met specifically in patients 13 months old and younger.

Methods:

Patients admitted to the pediatric critical care unit (PCCU) between March 1st and May 31st, 2018 who were exposed to benzyl alcohol, phenylalanine, propylene glycol, or sunset yellow were included. Medications containing these excipients were identified. The doses of excipients in mg/kg in selected medications used in the PCCU between March 1st and May 31st, 2018 were calculated.

Results:

At our institution, measurable exposure to benzyl alcohol and phenylalanine comes from dexamethasone 4 mg/mL injection, lorazepam 2 mg/mL injection, heparin 5000 units/mL injection, amoxicillin/clavulanate 400/57 mg suspension, and amoxicillin/clavulanate 600/42.9 mg/5 mL suspension.

Conclusions:

Decreasing exposure to benzyl alcohol and phenylalanine by administering oral lorazepam 2 mg/mL instead of intravenous whenever possible and by ordering the amoxicillin/clavulanate 600/42.9 mg/5 mL suspension from an alternative manufacturer may decrease associated adverse events. We will determine if implementing these changes decreases exposure to benzyl alcohol or phenylalanine, respectively, by 50%. These changes will slightly increase cost of amoxicillin/clavulanate and decrease cost of lorazepam.

IMPACT OF A PHARMACIST DRIVEN INSULIN DOSING PROTOCOL ON THE INCIDENCE OF HYPOGLYCEMIC EVENTS

Girgis L*, Zipperlen C, Valveri J, Gilbert G

South Nassau Communities Hospital, 1 Healthy Way, Oceanside, NY 11572

Background: Hypoglycemic events in hospitalized patients are associated with increased length of stay and poor clinical outcomes. Current data is limited on the impact of pharmacist driven insulin protocols in regards to preventing hypoglycemic events in the inpatient setting. The pharmacist's role in adjusting other medications has been documented and shown to have favorable outcomes. A pharmacist driven protocol was developed at this institution allowing for limited insulin dosing adjustments

Objective: The primary objective of this study is to measure the impact of a pharmacist driven insulin dosing protocol on the incidence of hypoglycemic events in the inpatient setting.

Methods: This is a retrospective chart review study assessing the incidence of hypoglycemic events four months prior to and four months after the implementation of a pharmacist driven insulin dosing protocol. Hypoglycemia is defined as blood glucose less than 70 mg/dL. Eligible patients are age 18 years and older receiving insulin therapy, with consecutive finger stick readings that reveal either a decrease in blood glucose greater than or equal to 60 mg/dL resulting in a blood glucose of less than 140 mg/dL or consecutive finger stick readings less than 100 mg/dL. For patients who meet this criteria, demographics, hemoglobin A1c, glucose monitoring, and hypoglycemic events will be collected from the electronic medical record.

Results: In progress

Conclusion: In progress

IMPACT OF GROUP ASTHMA EDUCATION CLASSES LED BY A MULTIDISCIPLINARY TEAM ON ASTHMA CONTROL IN ADULTS

Goday Peña S*, Ali A, Huggins C, Lugo E, Khaja M, Diaz-Fuentes G

BronxCare Health System 1650 Grand Concourse Bronx, NY 10457

Background:

Asthma is a common lung disorder. Poorly controlled asthma increases morbidity, mortality, and health care expenditures. Patient education and empowerment has been shown to be effective in improving asthma control. An asthma education program was started at our institution in 2016. Education is provided by a multidisciplinary team composed of pharmacists, respiratory therapists, and pulmonologists. This study was conducted to evaluate the effect of asthma group education on disease control.

Objective:

The primary outcome was a reduction in emergency room (ER) visits and hospital admissions. Secondary outcomes included asthma control, per Asthma Control Test (ACT) scores of 20 or greater, and steroid use.

Methods:

This was a retrospective review of medical records of all patients that participated in group asthma education from January 2016 to April 2018. Patients attended two-hour class sessions held on two consecutive Thursdays in their preferred language, English or Spanish. Standardized teaching materials were used. This study was approved by the Institutional Review Board.

Results:

88 patients participated in group asthma education during the study period; 82 attended both sessions. Group education resulted in decreased ER visits (51.2% vs 24.3% $p=0.0002$) and improved ACT scores (34.1% vs 53.7% $p=0.0043$). In addition there was a decrease in the use of systemic steroids (62.1% vs 34.1% $p=0.0005$). We found no differences in hospital admissions.

Conclusion:

Our study findings suggest that multidisciplinary group asthma education in an inner-city community is associated with improved asthma control and reduced ED use among patients with asthma.

ASSESSING ANTIMICROBIAL PRESCRIBING PATTERNS FOR ASYMPTOMATIC BACTERIURIA IN THE EMERGENCY DEPARTMENT SETTING

Gonyo BM*, Riddle L

St. Peter's Hospital Department of Pharmacy, 315 S. Manning Blvd., Albany, NY 12208

Introduction/Background: Due to the nature of the emergency department setting, many patients without symptoms of a urinary tract infection (UTI) may be tested and treated with antibiotics when not clinically necessary, identifying a potential opportunity for antimicrobial stewardship. According to IDSA guidelines, asymptomatic bacteriuria requires treatment only in the setting of pregnancy and patients undergoing traumatic/surgical urological intervention.

Objective: To identify opportunities to decrease inappropriate antibiotic use by assessing antimicrobial prescribing patterns in patients discharged from the emergency department with a diagnosis of a UTI, without accompanied symptoms.

Methods: This is the second phase of a two-part retrospective review, approved by the Institutional Review Board. The first phase was conducted from July to September 2017, with corresponding education provided to Emergency Department staff. In this second phase, patients will be identified using a daily culture and sensitivity report generated by the hospital laboratory. Adult females discharged from the emergency department with an antibiotic prescription for the treatment of a UTI between September 1st, 2018 and November 30th, 2018 will be included in the study. The following data will be collected and maintained confidentially without patient identifiers: medical record number, patient demographic information, antibiotic prescribed, culture and sensitivity information, and laboratory values related to UTI. The primary endpoint of the study is to characterize the percentage of patients treated for a UTI without accompanying symptoms and then compare the results from phase one to assess improvement of antimicrobial prescribing patterns.

Results: Pending

Conclusions: Pending

ANALYSIS OF TRANSFUSION REQUIREMENTS USING DIFFERENT DOSING STRATEGIES OF RECOMBINANT FACTOR VIIA (rFVIIa) FOR PERIOPERATIVE BLEEDING IN PATIENTS REQUIRING CARDIOPULMONARY BYPASS

Gregoire K*, Kersten B, Almeter M

Buffalo General Medical Center, Buffalo, NY 14203

Background: Recombinant factor VIIa (rFVIIa) may be administered for severe bleeding refractory to standard care in cardiac surgery patients despite the lack of safe and effective dosing. Our institution changed from a weight based to fixed dosing strategy in 2016.

Objectives: The primary outcome is to evaluate blood product utilization in patients that received fixed vs standard dosing strategies of rFVIIa for perioperative bleeding in cardiac surgery patients. Secondary outcomes include chest tube output and thrombotic events within 30 days.

Methods: This is a single-center, retrospective study evaluating rFVIIa utilization in cardiac surgery patients between July 1st, 2013 and December 31st, 2018. Adult cardiopulmonary bypass patients with refractory bleeding requiring massive transfusion protocol and additional hemostasis with rFVIIa were included. Jehovah Witnesses and patients with a primary coagulation defect were excluded. The fixed dosing approach was adopted in October 2016 and is defined as 2 mg intravenously with repeat dosing every 15 minutes until hemostasis.

Results: Thirty eight patients were included; 14 in the fixed dosing group and 24 in the standard dosing group. There was a non-statistically significant increase in blood product utilization in the fixed compared to standard dosing group (4914 ml vs 3969 ml, $p = 0.15$), but a lower rate of thromboembolic events (7.1% vs 16.6%, $p = 0.46$).

Conclusions: Fixed doses of rFVIIa may require a nonsignificant increase in blood product utilization, however is associated with a lower risk of thromboembolic events.

TRANSITION OF NOREPINEPHRINE TO PHENYLEPHRINE IN SEPTIC SHOCK PATIENTS WITH ATRIAL FIBRILLATION AND RAPID VENTRICULAR RESPONSE

Haiduc M*, Radparvar S, Altshuler J

The Mount Sinai Hospital/Touro College of Pharmacy, 1 Gustave L. Levy Place, New York, NY 10029

Background: Norepinephrine is used as a primary vasopressor in several shock states and the Surviving Sepsis Campaign guidelines recommend norepinephrine as the first-line vasopressor in septic shock. However, due to the potential arrhythmogenic effect of norepinephrine secondary to its modest activity at myocardial beta-1 receptors, phenylephrine (a pure alpha-1 agonist) is sometimes utilized instead in patients who develop arrhythmias. It is thought that switching norepinephrine to phenylephrine in patients who develop atrial fibrillation (AF) with rapid ventricular response (RVR) will remove adrenergic stimulation of the myocardium, but evidence behind this is lacking. The purpose of this study is to evaluate the effects of this practice on rate control and other outcomes in septic shock patients.

Objective: The primary endpoint was duration of AF with RVR, defined as heart rate (HR) > 110 beats per minute (bpm). Secondary endpoints included proportion of patients at goal HR (≤ 110 bpm) at 24 and 48 hours, average HR at 24 and 48 hours, percent time in goal HR at 24 and 48 hours, length of intensive care unit and hospital stay, and 30-day mortality.

Methods: This was a retrospective, single-center observational study evaluating outcomes in adult septic shock patients who were transitioned to phenylephrine versus those who were continued on norepinephrine after onset of AF with RVR. Patients in the cardiac surgery population were excluded.

Results: Pending.

Conclusions: Pending.

UTILIZING NASAL METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* POLYMERASE CHAIN REACTION SCREENING TO REDUCE VANCOMYCIN UTILIZATION FOR HCAP TREATMENT

Harmon R*, Krichavets I

Lenox Hill Hospital 100 E 77th St, New York, NY 10075

Background: IDSA has removed healthcare-associated pneumonia (HCAP) from the 2016 HAP/VAP guidelines. There is increasing evidence that patients previously defined as HCAP are not at high risk for MDR pathogens. Guidelines recommend de-escalation based on cultures which take up to 96 hours to process and can be difficult to obtain. PCR provides rapid turnaround and a high negative predictive value for ruling out MRSA pneumonia in patients with HCAP.

Objective(s): We assess the safety and benefit of nasal swab screening in HCAP patients to guide de-escalation.

Methods: We will perform a retrospective pre- and post-education cohort study at Lenox Hill Hospital evaluating the reduction of empiric vancomycin use after the implementation of routine MRSA PCR nasal swab screening for HCAP patients. Patients will be included if they had a vancomycin order for an HCAP indication, are 18 years or older, and are on either of two pre-determined Medicine Regional Floors. Patients will be excluded if they have any identified or suspected extra-pulmonary MRSA infection, or other MRSA PNA risk factors. Baseline demographics will be recorded as well as laboratory results, imaging, and MRSA PNA risk factors. The provider may then choose to stop vancomycin based on a negative PCR, lack of other non-HCAP risk factors, and lack of supporting cultures for MRSA PNA infection as suggested by our education. Outcomes of interest to be measured include vancomycin duration of therapy, number of vancomycin levels drawn, incidence of new-onset renal failure, all-cause mortality, and hospital length of stay.

Results: In Progress

Conclusions: In Progress

EVALUATION OF GLUCOSE MANAGEMENT BETWEEN INSULIN NAÏVE AND INSULIN DEPENDENT PATIENTS WITH GLUCOCORTICOID-INDUCED HYPERGLYCEMIA

Harris, A*, Fulman, M

Montefiore Nyack Hospital 160 N Midland Ave, Nyack, NY 10960

Background: Glucocorticoids are often used acutely to aid in treatment of many different illnesses but can worsen hyperglycemia in diabetic patients or induce diabetes. Additionally, acute hyperglycemia is associated with higher infection rates, increased length of hospital stay, risk of admission to the intensive care unit, poor wound healing, and higher risk of hospital mortality. Out of all the corticosteroid related adverse drug reactions for 2018 at our institution, 52% were hyperglycemia. Currently, there is no universally accepted starting dose for initiation of insulin therapy or how to adjust the patients home insulin dose while they are concurrently receiving steroids.

Objective: The primary objective of this study is to evaluate the use of insulin in the management of glucocorticoid induced hyperglycemia between patients who were insulin naïve or insulin dependent. Secondary objective was the evaluation of different insulin regimens to include time to initiation of insulin, frequency of insulin adjustments and the percentage of hypoglycemia (<70 mg/dL).

Methods: This is a retrospective cohort study, approved by the hospital's institutional review board, of patients admitted between January and July 2018. Patients were included if they received at least one dose of IV methylprednisolone and had a corresponding blood glucose level > 200 mg/dL, with or without a history of diabetes. Mean daily blood glucose levels will be calculated for each patient. The percent of daily glucose levels below the target of <180 mg/dL while concurrently on steroids will also be evaluated.

Results: In progress.

Conclusions: In progress.

GLYCEMIC MANAGEMENT IN HOSPITALIZED PATIENTS RECEIVING TOTAL PARENTERAL NUTRITION

Hennig, K*, Whalen, K, Rahme, C, Wyckoff, A

St. Joseph's Health, 301 Prospect Avenue, Syracuse, NY 13023

Wegmans School of Pharmacy, St. John Fisher College, 3690 East Ave, Rochester, NY 14618

Background: At this 451-bed community teaching hospital there are no standardized practices for glycemic management in patients receiving total parenteral nutrition (TPN). The literature supports the use of multiple insulin management practices, including insulin infusions, adding insulin to TPN, basal insulin, bolus insulin, or a combination thereof.

Objective: This retrospective chart review aims to determine current insulin management practices for TPN patients. A process improvement initiative, if needed, will be based on the data collected.

Methodology: This study was approved through expedited review by the Institutional Review Board. The electronic health record was used to identify TPN patients from January 1st, 2018 to March 31st, 2018. Patients 18 years and older who received a TPN for at least 24 hours will be included. Patients will be excluded if they used an insulin pump as well as if they received TPN, without lipids, within 7 days prior to hospital admission, and intradialytic during the admission. Data collection includes, but is not limited to, demographics, type of diabetes, admission hemoglobin A1c, medications prior to admission, renal function, concurrent steroid use, and the dextrose content of the TPN. On days two through seven, all blood glucoses and insulin regimens will be collected, average daily blood glucoses will be calculated, and glycemic excursions will be analyzed. The data will be evaluated via descriptive statistics and used to formulate process improvement recommendations.

Results: results pending

Conclusion: results pending

IMPACT OF PHARMACIST INTERVENTION ON MEDICATION LITERACY AND ADHERENCE IN CARDIAC PATIENTS

Hurley L*, Studlack E, Vink T

Mercy Hospital of Buffalo, 565 Abbott Rd, Buffalo, NY 14220

Background: Medication nonadherence is associated with higher rates of hospital admission, increased morbidity and mortality, and increased health care costs. Implementation of a pharmacist-driven transitions of care program has been shown to reduce hospital readmissions and improve health literacy and medication adherence in patients with heart failure or myocardial infarction. Pharmacist interventions include conducting medication reconciliation, discharge counseling, and post-discharge follow-up. This study was conducted to assess the impact of pharmacist intervention on medication literacy and adherence in cardiac patients at Mercy Hospital of Buffalo.

Objective: The primary outcome was the change in Medication Adherence and Literacy (MedAL) score from baseline to 30 days post-discharge. Secondary outcomes included time spent on interventions and healthcare utilization within 30 days post-discharge. Patients were excluded if their primary reason for admission was a non-cardiac diagnosis, were observation status, left against medical advice, or discharged to subacute rehabilitation center, long-term care, group home, or other institutional setting.

Methods: This was a prospective, single-center study designed to compare the change in MedAL score from pre- to post-discharge to determine the impact of pharmacist intervention on cardiac patients. Pharmacist intervention included collecting and reconciling admission and discharge medication lists, medication and adherence counseling, and a 30-day post-discharge phone call. This study was approved by the Catholic Health System Institutional Review Board.

Results: In progress

Conclusions: In progress

UTILIZING AN OPIOID RISK ASSESSMENT TOOL TO IDENTIFY MEMBERS AT RISK FOR OVERDOSE

Hwang G*, Thomas T

Capital District Physicians' Health Plan, 500 Patroon Creek Blvd, Albany, NY 12206

Background: The Center for Disease Control and Prevention and the U.S. Veterans Affairs (VA) guidelines for opioid therapy encourage evaluation of opioid-related risk factors prior to initiating treatment. In a continuing effort to promote safe opioid use, an opioid risk assessment tool was implemented in a managed care organization setting to evaluate a member's likelihood of an opioid overdose. The tool is based on the VA's Risk Index for Overdose or Serious Opioid-Induced Respiratory Depression (RIOSORD) predictive model.

Using a simple scoring algorithm, the tool identifies 15 risk factors that may put a member at increased risk of overdose, such as comorbidities and concurrent benzodiazepine use. The tool aims to support targeted interventions to lower risk of accidental overdose.

Objective: To evaluate the impact of utilizing a risk assessment tool to identify members at increased risk for opioid-related overdose that would benefit from targeted interventions and educational support.

Methods: This is a prospective, observational cohort study that included all CDPHP members with active coverage and at least one active opioid prescription. Utilizing internal reporting and claims database, pharmacy and medical predictor items were flagged using prescription claims and ICD-10-CM diagnosis codes from 6 and 12 months prior to the cutoff date, respectively.

Results: Pending

Conclusion: By utilizing early risk identification and ongoing assessment, the tool provides an opportunity to proactively reach out to providers with members who may benefit from targeted interventions such as opioid and benzodiazepine tapering strategies, alternative therapy options, and ensuring member access to naloxone.

CANDIDA AURIS DECOLONIZATION PROTOCOL USING ESTABLISHED ANTIMYCOTIC DRUG TREATMENTS AND BODY WASH SOLUTIONS

Brooks S, Burney S, Maniara B, Kalia N*, Bradley N, Cohen H

Kingsbrook Jewish Medical Center, 585 Schenectady Ave, Brooklyn, NY 11203

Background: *Candida auris* is an emerging fungus associated with high mortality rates due to its propensity to cause invasive infections and its frequent resistance to multiple antifungal classes. In June 2016, the Centers for Disease Control and Prevention (CDC) issued a *C. auris* alert, requesting all cases be reported to state and local health departments, and to the CDC. Kingsbrook Jewish Medical Center (KJMC) and Rutland Nursing Home (RNH) have implemented a screening process for patients at high risk for *C. auris*. Although decolonization attempts have been implemented at KJMC, there has been minimal success. Research suggests that terbinafine may have potential to decolonize patients of *C. auris*, thus reducing invasive infection risk.

Objective: To implement a *Candida auris* decolonization protocol using oral terbinafine in conjunction with oral nystatin for bowel decolonization, intranasal nystatin cream for nasopharyngeal decolonization, and antifungal topical Theraworx® bath towelettes for skin wash.

Methods: Nursing home residents from RNH who are currently colonized with *Candida auris* were selected to participate in this pilot study. Patients were excluded if they had critical conditions, absolute neutrophil count < 1000 cells/mm³, chronic or active hepatic disease, dialysis, creatinine clearance < 30 mL/min, or documented terbinafine allergy, or if they are currently receiving intravenous antifungal medications, or medications metabolized by CYP2D6.

Results: Results pending

Conclusions: It is hypothesized that the combination of terbinafine, nystatin, and Theraworx® will decolonize patients who are colonized with *Candida auris*.

IMPACT OF AREA UNDER THE CURVE-BASED (AUC) VANCOMYCIN DOSING ON PHARMACIST WORKFLOW AND PATIENT MONITORING AND TOXICITY

Keaton B*, Adams-Sommer V, Saunders-Hao P

The Mount Sinai Hospital, 1 Gustave L. Levy Place, New York, NY 10029

Background: Vancomycin is the frontline empiric antibiotic for hospitalized patients with suspected Gram-positive infection. Vancomycin pharmacokinetic/pharmacodynamics studies have demonstrated clinical efficacy when the AUC:MIC ratio is greater than 400. Trough values were thought to correlate to therapeutic AUC:MIC, but recent data have shown the correlation is inconsistent, potentially subjecting the patient to toxic or ineffective doses.

Objective: Our institution incorporated AUC-based dosing into our protocol in March 2019. Patients with known methicillin-resistant *Staphylococcus aureus* (MRSA) infections or those on vancomycin for greater than 7 days will be changed to AUC-based dosing, so pharmacists will use trough-based and AUC-based dosing regimens. Data will be collected to evaluate two endpoints: 1) the impact on pharmacist workflow and 2) the impact on toxicity and efficacy.

Methods: This is a single-center, prospective quality improvement study. Pharmacists responsible for pharmacy vancomycin dosing will be re-educated on the pharmacokinetics of vancomycin and the AUC dosing procedures and calculations. Physicians and nursing staff will be educated on protocol revisions, as it will apply to vancomycin adjustments and need for additional levels. Data to be collected will include pharmacist time spent evaluating and making adjustments to vancomycin dosing in both trough-based and AUC-based dosing patients; number of days per patient to achieve target trough or AUC; number of dose adjustments needed to achieve target goals; number of appropriately drawn therapeutic, subtherapeutic, supratherapeutic troughs; number of patients achieving target trough or AUC goals; and baseline and peak serum creatinine while on vancomycin therapy.

Results: In progress

Conclusion: In progress

USE OF ABACAVIR FOLLOWING CARDIOVASCULAR CONTROVERSY

Khaimova R*, Cha A, McIver L

The Brooklyn Hospital Center, 121 Dekalb Ave, Brooklyn, NY 11201

Background: People living with human immunodeficiency virus (HIV) are at a higher risk of a cardiovascular event (CVE) in the future. Some observational cohort studies suggest that there is an increased risk of myocardial infarction in adults with recent or current use of abacavir, however other studies fail to show this association. While the data is conflicting, because of the higher risk of CVD in our patients living with HIV it may be prudent to determine the percentage of patients on abacavir that have cardiovascular risk factors and can be switched to an alternative antiretroviral therapy.

Objective: The primary outcome was the percentage of patients on abacavir that have an elevated cardiovascular risk defined by a 10-year ASCVD risk of at least 7.5% and were not switched off abacavir during study period. Secondary outcomes included patients with history of ASCVD, not on antiplatelet therapy, not on appropriate statin therapy, have uncontrolled diabetes, currently smoking, and have uncontrolled hypertension.

Methods: This is a retrospective chart review at a single center, PATH clinic at The Brooklyn Hospital Center. All HIV positive patients that visited the PATH clinics at least 3 times during the study period from July 2017 to July 2018 were eligible for inclusion

Results: There were 132 out of 276 patients (48%) that had an elevated ASCVD risk score and 80 of them (61%) were not switched off their abacavir – containing regimen.

Conclusions: Patients are not being appropriately stratified high risk and considering switching antiretroviral therapy (ART).

EVALUATION OF PRESCRIBING AND USE OF ANALGESIA IN THE COMMUNITY HOSPITAL SETTING

Kholina J*, Baratt Y, Li D

Mount Sinai Brooklyn, 3201 Kings Highway, Brooklyn, NY 11234

Background: In January 2018, The Joint Commission defined new pain assessment and management standards to improve the safety and quality of patient care. The report highlighted the importance of pain assessment and management and identified safe opioid prescribing as an organization priority. To address this, healthcare organizations should examine and develop methods to improve the prescribing, administration, and documentation practices for analgesics.

Purpose: The purpose of this project was to evaluate the effectiveness of pharmacy driven education to improve analgesic prescribing and administration practices.

Methods: A retrospective review of analgesic prescribing and administration practices was conducted at Mount Sinai Brooklyn hospital from May to July 2018. Pharmacist education on the importance of an accurate, non-duplicate order placement, verification process and pain scale assessment and documentation for analgesia was executed in February 2019. Post educational analgesic utilization practices were reviewed from February to March 2019. Patients were randomly selected via computer generated reports of individuals who have received pain management pharmacotherapy. The following data was collected: type of analgesic, number of doses, pain scale and nursing assessment of pain. The analysis focused on analgesics administered on an “as needed” basis, standing pain medication orders were excluded. Practices from both study periods were compared to determine the impact of pharmacist driven education on the improvement of analgesic prescribing and administration practices.

Results: pending

Conclusions: pending

IMPACT OF PHARMACIST-LED INTERVENTIONS ON DSRIP MEDICATION ADHERENCE MEASURES FOR ORAL DIABETES, DYSLIPIDEMIA, AND HYPERTENSION MEDICATIONS

Ki T*, Sabharwal N, Kang K, Schiller L

BronxCare Health System 1650 Grand Concourse Bronx, NY 10457

Background: Medication adherence to key therapeutic classes has been shown to decrease both morbidity and mortality. Therefore, the clinical pharmacy team at BronxCare health system is leading the initiative on monitoring the Delivery System Reform Incentive Payment Program's (DSRIP) medication adherence measures. Our team is tracking the following medication adherence measures in the outpatient setting: oral diabetes, dyslipidemia, and hypertension medications. A new "Action List" feature recently incorporated into Allscripts, the hospital electronic health record (EHR), is used by the clinical pharmacist to track both the progress of and to improve patients' medication adherence measures.

Objective: The primary objective of the study was to evaluate the impact of the clinical pharmacist using an EHR Action List on improving patient's medication adherence rate to >80% compared to a pre-intervention group.

Methods: The study was a retrospective, single-center, pre-post observational study that assessed the efficacy of pharmacy intervention on medication adherence. The adherence rates will be measured against data obtained from Healthfirst for adherence rates for 2017 versus 2018.

Results: For the 2018 calendar year, the adherence rates for oral cholesterol, hypertension, and diabetes medications were 79%, 81% and 85% respectively, compared to 2017 calendar year which were 74%, 78%, and 81% respectively.

Conclusion: The interventions made by pharmacy have increased the level of adherence to chronic medications.

AN EVALUATION OF VANCOMYCIN DOSING STRATEGY: TROUGH VS. AUC/MIC

Kim C*, Danek M, Woodruff A, Sandhu G

Buffalo General Medical Center, 100 High Street, Buffalo, NY 14203

Background: Vancomycin currently serves as the drug of choice for methicillin-resistant *Staphylococcus aureus* (MRSA) infections. Area under the curve (AUC) to minimum inhibitory concentration (MIC) ratio is the PK/PD parameter that best predicts the clinical efficacy of vancomycin in *S. aureus* infections. However, due to practicality reasons, current guidelines suggest using vancomycin trough level monitoring as a surrogate. Vancomycin also holds a parallel dose-toxicity relationship which means higher doses are more commonly associated with nephrotoxicity. This risk is even higher in the obese patient population.

Objective: The objective of this study is to assess the association between measured vancomycin trough levels with calculated AUC/MIC levels and the incidence of nephrotoxicity in all patients receiving vancomycin at Buffalo General Medical Center (BGMC). A sub-group analyses will be performed on obese patients with body mass index (BMI) greater than 30 kg/ m².

Methods: This study is a retrospective, observational, quality improvement study from February 2019 to April 2019. A proposal to change the pharmacy-to-dose maintenance dosing protocol from trough level monitoring to AUC/MIC level monitoring was approved by the Antibiotic Subcommittee of the P&T Committee in January 2019. Data collection will involve patient demographics, infection-related parameters and antibiotic-related parameters. A vancomycin AUC excel calculator will be used to calculate all AUC levels. Spearman's correlation test will be utilized to measure the association between vancomycin trough levels to AUC/MIC levels while the Chi-squared test will be used to assess nephrotoxicity differences within the different BMI groups.

Results: Results pending.

Conclusion: Results pending.

EVALUATING THE IMPACT OF IMPLEMENTING ORDER PANELS TO INCREASE EMERGENCY DEPARTMENT CLINICIANS' COMPLIANCE WITH EMPIRIC ANTIBIOTIC THERAPY HOSPITAL GUIDELINES

Klingelsmith J*, Whalen K, Rahme C, Niemiec A, Taranto M, Avery L

St. Joseph's Health, 301 Prospect Avenue, Syracuse, NY 13203

Wegmans School of Pharmacy, St. John Fisher College, 3690 East Ave, Rochester, NY 14618

Background

Emergency department (ED) clinicians play a major role in determining empiric antibiotics. Order panels were developed in October 2018 in the electronic medical record (EMR) for common infections based on guidelines and hospital resistance patterns.

Objective

The purpose of this retrospective study is to evaluate the impact of empiric antibiotic order panels on ED clinicians' compliance with hospital guidelines for skin and soft tissue (SSTI), urinary tract (UTI), intra-abdominal infections, and meningitis.

Methods

This study received expedited approval by the Institutional Review Board. A report generated from the EMR identified patients who received antibiotics for SSTI, UTI, intra-abdominal infections, and meningitis between 4/1/18-6/30/18 and 11/1/18-1/31/19.

Adults admitted and treated empirically in the ED are included. Patients were excluded if transferred from another facility, had multiple antibiotic indications, animal or human bites, on dialysis, received care in the intensive care unit (except meningitis), left against medical advice, or hospital stay less than 24 hours.

The primary outcome is the ED clinicians' compliance with empiric antibiotic guidelines prior to and after order panel implementation. Secondary outcomes are time to first dose of appropriate antibiotic, total antibiotics given within the first 24 hours, hospital onset *Clostridium difficile*, allergic reactions, acute kidney injury occurring within 72 hours from antibiotic discontinuation, length of stay, and in-hospital mortality. A sub-group analysis on the effect of panel utilization will be performed.

In order to detect 20% difference in compliance with 80% power, a sample size of at least 100 patients will be included from each time period.

Results

Pending

Conclusions

Pending

PREScribing PATTERN AND APPROPRIATENESS OF ANTICOAGULATION IN NEW ONSET NON-VALVULAR ATRIAL FIBRILLATION IN HOSPITALIZED OLDER ADULTS

Lee C* , Beizer J

North Shore University Hospital, 300 Community Drive, Manhasset, NY 11030

Background: The prevalence of atrial fibrillation (AF) increases dramatically with advancing age, which usually requires anticoagulation for thromboembolic prophylaxis. Anticoagulation with warfarin has traditionally been recommended for older adults, however, there are consistent findings with newer direct oral anticoagulants (DOAC) demonstrating greater benefit in reducing the risk of ischemic stroke or systemic embolism versus warfarin in older adults. With new DOACs available and limited studies on the older population, the prescribing pattern and the influencing patient factors are unknown.

Objective: To determine the prescribing pattern and appropriateness of initial anticoagulation prescribed in new onset non-valvular atrial fibrillation in hospitalized older adults.

Methods: This was a single center, retrospective chart review to determine the percentage of patients prescribed warfarin versus DOACs (apixaban, dabigatran, and rivaroxaban) for newly diagnosed non-valvular atrial fibrillation. The following data was collected: gender, weight, height, age in groups (<65, 65-74, 75-84, ≥85 years), initial anticoagulant, dose, and frequency initiated, and serum creatinine.

Results: “results pending”

Conclusion: By understanding the prescribing pattern and appropriateness of the anticoagulants, it will allow for educational opportunities for physicians as well as understand the trend in prescribing warfarin versus DOACs in older adults for future research.

IMPLEMENTATION AND IMPACT OF A TRANSITIONS OF CARE PHARMACY PROGRAM AT A LARGE TERTIARY MEDICAL CENTER

Dena Lehmann, PharmD¹, Carissa Mancuso, PharmD¹, Gina Caliendo, PharmD, BCPS¹

¹The Mount Sinai Hospital, One Gustave L. Levy Place, New York, NY, 10029

Background: Medication issues have been identified as a key contributor to hospital readmissions and adverse outcomes. Through optimization of medication therapy, Transitions of Care (TOC) pharmacy programs have been proven to reduce adverse medication events, streamline communication for interdisciplinary teams and patients, and reduce 30-day hospital readmissions.

Objective: The primary endpoint is 30-day all-cause readmission and emergency department visits. Secondary endpoints include the number of patients referred, the number of patients identified, types of pharmacist interventions, provider and patient satisfaction scores, and cost avoidance.

Methods: In Spring 2018, four pharmacotherapy care specialists were hired to develop a TOC pharmacy program on select general medicine units. The TOC pharmacists perform admission and discharge medication reconciliations, provide therapeutic alternatives, identify medication omissions or duplications, recommend dosing changes, counsel patients on medications and disease states, train patients on device use (eg, glucometers), assist with prior authorizations, and engage in patient follow-up. The computer-generated reports for all patients seen by the TOC pharmacists will be reviewed and compared to historical readmission data.

Preliminary findings: Misperception of the specific roles and responsibilities of the TOC pharmacists was one barrier faced during implementation. To overcome this issue, the TOC pharmacists attend monthly orientations of new residents to introduce themselves and clearly delineate their roles. Since program implementation, practitioners and hospital administrators have requested TOC pharmacist involvement on additional patient-care units, including cardiology and medical-surgery.

Results: In Progress

Conclusions: In Progress

A MODEL FOR AMBULATORY CARE PHARMACIST INVOLVEMENT IN TRANSITIONAL CARE TO REDUCE ACUTE HEALTH CARE UTILIZATION

Leistman S*, Ahmed-Sarwar N, Nagel A, Fogarty C

Highland Family Medicine – 777 South Clinton Avenue, Rochester, NY 14620

Background: The impact of a clinical pharmacist during transitions of care (TOC) has been well validated in the literature, but the way in which pharmacists are involved is highly-variable and institution-specific. Utilizing a clinical pharmacist in the outpatient setting, focusing on patients with a recent hospital admission, can help prevent gaps in care while also having a positive effect on readmission rates and overall patient outcomes. The purpose of this study is to describe the impact of adding a clinical pharmacist to the transitional care team on acute health care and overall patient outcomes.

Objective: The primary outcome was number of acute health care encounters (emergency department (ED) visits and/or hospital admissions). Secondary outcomes included describing the type and frequency of patients' contact with the healthcare system, clinical pharmacist interventions, and improvement in disease-state outcomes.

Methods: This was a single-center, prospective, pre-post observational study to evaluate a newly-established pharmacist service in a large, academic, family medicine clinic. Patients served as their own control and were included if they met pre-determined "high-risk" criteria. Results were compared between the six months prior to and after pharmacist intervention.

Results/Conclusions: A total of 52 patients were included. In the six months prior to enrollment, the average number of acute health care encounters per patient was 4.2 (2.4 hospital admissions and 1.8 ED visits). Chronic disease diagnoses at baseline included hypertension (94.2%), type 2 diabetes mellitus (59.6%), chronic obstructive pulmonary disease (40.4%), and heart failure (38.5%). Additional outcomes results and conclusions are currently in progress.

EVALUATION OF APOLIPOPROTEIN B AS A MARKER OF RESIDUAL RISK FOR CARDIOVASCULAR DISEASE IN PATIENTS WITH HIV

Lepa T*, Fischetti B, Cha A, Cope R, McIver L, Berkowitz L

Long Island University, 1 University Plaza, Brooklyn, NY 11201

The Brooklyn Hospital Center, 121 Dekalb Avenue, Brooklyn, NY 11201

Background: With the advancements in treatment of HIV with novel antiretroviral therapies, clinicians are faced with the task of managing the chronic disease states of people living with HIV such as diabetes, hypertension and dyslipidemia. As cardiovascular disease remains the number one cause of death worldwide, an emphasis has been placed on establishing appropriate measures for detection and prevention. Multiple studies have hypothesized that people living with HIV are at an increased risk for cardiovascular disease due to inflammatory processes and lipid dysregulation from the virus itself and potentially antiretroviral therapies. While low-density lipoprotein cholesterol remains the gold standard for representing cardiovascular risk, apolipoprotein B has gained attraction as another potential biomarker for predicting risk of cardiovascular disease as it represents the total number of atherogenic particles in circulation.

Objective: To assess if patients with HIV who are on appropriate lipid-lowering medications may have residual risk for cardiovascular disease with elevated apolipoprotein B levels.

Methods: This is a prospective, observational study within two HIV clinic sites including patients with a diagnosis of HIV who are greater than 18 years old. Patients that are eligible for participation in the study will complete an informed consent form. Once informed consent is obtained, a lipid panel and apolipoprotein B level will be collected. Apolipoprotein B > 90 mg/dL will be considered elevated. Apolipoprotein B levels will also be compared with LDL-C, non-HDL-C and calculated ASCVD risk scores.

Results: Pending

Conclusions: Pending

PERIPROCEDURAL INTERRUPTION OF DIRECT ORAL ANTICOAGULANTS FOR PERCUTANEOUS CORONARY INTERVENTION

Leung WY*, Wang Z

Mount Sinai St. Luke's Hospital, 1111 Amsterdam Avenue, New York, NY 10025

Mount Sinai West Hospital, 1000 10th Avenue, New York, NY 10019

Touro College of Pharmacy

Background: Direct oral anticoagulants (DOAC) are widely used for prevention of stroke in non-valvular atrial fibrillation (NVAf), and treatment and prevention of venous thromboembolism (VTE). Clinical data for periprocedural management of DOAC is urgently needed to develop a reliable interruption plan for Percutaneous Coronary Intervention (PCI).

Objective: We aim to assess the rate of bleeding and thromboembolic events with various durations of DOAC interruption and re-initiation for PCI.

Methods: This was a retrospective, single-center, matched cohort pilot study to assess the rates of bleeding and thromboembolic events. Patients were stratified based on DOAC type, renal function, study-defined interruption and re-initiation intervals, and were matched for history of VTE, history of NVAf, CHAD₂VASC₂ and HASBLED score.

Results: This study is under IRB review. Results are expected by April 2019.

Conclusions: This study is under IRB review. Results are expected by April 2019.

LOW INTENSITY HEPARIN INFUSION BLEED RISK AND OUTCOMES ANALYSIS

Lewandowski E*, Zammit K, Cieri-Hutcherson N, Lutley B, Lackie C

Buffalo General Medical Center, 100 High Street, Buffalo, NY 14203

Background: Heparin is an anticoagulant important to clinical practice. Kaleida Health has four heparin infusion protocols, separated by indication and aPTT goals. The low intensity heparin infusion protocol is the most conservative (aPTT goal 60-80) and is reserved for patients in which a concern for bleeding exists. The bleeding risks of this population are not well defined. Validated scores such as IMPROVE, REITE, and HASBLED measure bleeding risks in similar populations to those that receive each of these protocols.

Objective: The purpose of the study was to evaluate and compare the bleeding risk of the patient population that receives the low intensity heparin protocol versus the adult heparin protocol. This will allow us to determine if it is necessary to have separate protocols or if there are specific indications that can be set for the use of the low intensity protocol.

Methods: This was a retrospective, multi-center, chart review was conducted of the Kaleida Health medical record at Buffalo General Medical Center and Millard Fillmore Suburban Hospital. The electronic health record was queried for patients receiving either protocol from August 2017 to August 2018. Data was collected on each patient regarding known risk factors for bleed. These factors included demographics and laboratory values such as: age, sex, complete blood count and serum creatinine. Information was also collected regarding: history of bleed, recent trauma or surgery, and concurrent medications associated with high bleed risk. Lastly, the IMPROVE, REITE, and HASBLED scores were calculated for all patients.

Results: Results pending

Conclusions: Results pending

QUALITATIVE ANALYSIS OF CONDITIONING ORDER SETS UTILIZED IN AUTOLOGOUS STEM CELL TRANSPLANT

Liu V*, Chin J, Braunstein M

NYU Winthrop Hospital, 259 First Street, Mineola, NY 11501

Background: NYU Winthrop Hospital is under pre-accreditation from the Foundation for the Accreditation of Cellular Therapy for autologous hematopoietic stem cell transplant (aHSCT). Melphalan and BEAM (carmustine, etoposide, cytarabine, melphalan) are two order sets for aHSCT. Patients with multiple myeloma will receive melphalan and patients with lymphoma will receive BEAM. Before 2017, there were no order sets for aHSCT patients.

Objective: This study will compare clinical outcomes of aHSCT recipients prior to and after standardized protocols were implemented to improve measures for future patients.

Methods: This was a retrospective and single-center study. Patients who received aHSCT from 2009-2018 were included. The following data were collected: age, gender, diagnosis, number of prior transplants, chemotherapy received, length of stay, time to engraftment, development of febrile neutropenia, duration of antibiotics, and survival status.

Results: 43 patients were included. 31 patients did not receive protocols for melphalan or BEAM. 12 patients received standardized protocols. The median length of stay in the protocol group was 16 days compared to 18 days in the control group. 24 patients in the control group developed febrile neutropenia and treated with antibiotics for an average of 5 days. The protocol group had 5 patients with febrile neutropenia and subsequently was treated an average of 3 days.

Conclusions: Based on preliminary data, implementation with a protocol for conditioning chemotherapy was associated with shorter length of stay and fewer episodes of febrile neutropenia. However, more patients need to be enrolled to determine the significance of protocol-based conditioning chemotherapy.

ASSESSING APPROPRIATENESS OF SUGAMMADEX USE IN ACCORDANCE WITH PHARMACY AND THERAPEUTICS
COMMITTEE APPROVED CRITERIA

Lucarelli R*, Brown S, Kennicutt J

St. Peter's Hospital Department of Pharmacy, Albany, NY 12208

Background: In an attempt to conserve medication costs, St. Peter's Hospital has placed prescribing restrictions on sugammadex, an agent for the reversal of neuromuscular receptor blocking agents. Sugammadex is restricted to use by Anesthesia and the Emergency Department. Sugammadex use is also restricted to patients that have had surgery aborted, rapid sequence intubation aborted, or if neostigmine administration has been inadequate. Concern has been raised from the pharmacy department that prescribing patterns do not align with the current restrictions placed on sugammadex utilization.

Objective: To assess if sugammadex is being used in accordance with St. Peter's Hospital restriction for use guidelines and to determine if further education or mitigation strategies need to be implemented.

Methods: This evaluation is a four month, retrospective, EMR review of patients at St. Peter's Hospital who have received sugammadex. A list of patients was provided by information technology and was used to identify charts that were eligible for review. Only information available from the EMR was assessed. The appropriateness of sugammadex administration was determined using the special use guidelines. In order to assess this, the department where sugammadex was administered, documented reason for utilization, and prior administration of neostigmine, among other data was collected. The primary endpoint is the percentage of sugammadex administration that conforms to St. Peter's Hospital's restriction for use guidelines. Secondary outcomes include time between sugammadex administration and admission to PACU, and percentage of inappropriate administration by department.

Results: Pending

Conclusions: Pending

INCIDENCE OF ACUTE KIDNEY INJURY IN SEPTIC PATIENTS RESUSCITATED WITH NORMAL SALINE OR BALANCED CRYSTALLOIDS

Ly C*, Koo A, Wiafe J

Mount Sinai St. Luke's, 1111 Amsterdam Ave, New York, NY 10025
Mount Sinai West, 1000 10th Ave, New York, NY 10019

Background: Normal saline (NS) and balanced crystalloids (BC) are used for volume resuscitation in sepsis, but guidelines have not recommended a specific crystalloid.

Objective: The incidence of acute kidney injury (AKI) was evaluated in septic patients who received at least 30 mL/kg of either NS or BC (Lactated Ringer's or PlasmaLyte).

Methods: 201 patients at two academic hospitals diagnosed with sepsis, severe sepsis, or septic shock were included in an institutional review board-approved, retrospective cohort trial. Patients received at least 30 mL/kg of crystalloid fluid within 24 hours of sepsis identification. The primary endpoint was the development of AKI within 7 days of sepsis identification. T-test and Fischer's Exact were used to analyze numerical and categorical data, respectively.

Results: Among 196 patients in the NS group, 14 (7%) developed AKI, compared to 1 of 5 patients (20%) in the BC group (odds ratio (OR), 3.25; 95% confidence interval (CI), 0.34- 31.07; $p = 0.3$). In-hospital mortality during admission was 10% in the NS group and 0% in the BC group (OR, 0.83; 95% CI, 0.04-15.54; $p = 0.9$). Mean hospital length of stay in the NS group was 9.4 days, compared to 10.2 days in BC group ($p = 0.4$). Renal replacement therapy was not initiated in either group.

Conclusions: No statistically significant difference was seen in the incidence of AKI between the use of NS and BC. Larger sample sizes and further evaluations are necessary to determine a clinical significance.

LIGHT-PROTECTION OF PARENTERAL NUTRITION SOLUTIONS TO REDUCE OXIDATIVE RELATED COMPLICATIONS INCLUDING CHOLESTASIS IN NEONATES

Macchiarulo M*, Clauss C, El-Chaar G, Akerman M, Tiozzo C

NYU Winthrop Hospital, 259 1st St, Mineola, NY 11501

Background: Total parenteral nutrition (TPN) preparations form free radicals/oxidants, specifically peroxides when exposed to light. Premature neonates lack antioxidants due to immature physiology. These oxidants cause cell damage and have been attributed to the development of bronchopulmonary disease (BPD), retinopathy of prematurity (ROP), necrotizing enterocolitis (NEC), and death. Oxidant imbalance may also contribute to the development of TPN-associated cholestasis.

Objectives: The primary objective of this study is to evaluate the effect of light-protecting TPN on cholestasis. Secondary objectives include evaluation of BPD, ROP, NEC, and death.

Methods: A retrospective chart review approved by the Institutional Review Board, evaluated neonatal patients who received TPN therapy throughout their neonatal intensive care unit (NICU) stay from September 2017 to January 2019. Conjugated hyperbilirubinemia is a manifestation of cholestasis, generally defined as conjugated bilirubin level greater than 2 mg/dL. In our NICU, 2 in 1 parenteral nutrition light-protection using amber bags was initiated in April 2018. Neonatal patients were included if they were born prematurely and administered TPN for a duration of two or more weeks.

Results: 387 patient charts were reviewed for inclusion in this study and 45 patients were included. Mean peak direct bilirubin in the before light protection group was 3.0 ± 2.6 mg/dL and 1.2 ± 0.7 mg/dL in the after light protection group (P-value=0.02). There were no statistically significant differences in the incidence of BPD (P-value=1), ROP (P-value=0.75), NEC (P-value=0.12), or death (P-value=1).

Conclusion: Light protecting 2 in 1 parental nutrition preparations appears to be effective in decreasing the incidence of TPN-induced cholestasis.

A PRACTICAL APPROACH TO OUTPATIENT INTRAVENOUS AMPICILLIN ADMINISTRATION

Maciulewicz T*, Seabury R, Kufel W, Miller C, Darko W, Probst L

Upstate University Hospital, 750 East Adams Street, Syracuse, NY 13210

Background: Due to currently available data showing limited chemical stability of intravenous (IV) ampicillin, this therapy is infrequently used in the home infusion setting. Alternative therapies that offer improved patient convenience are often used instead, but these therapies commonly provide broader spectrums of activity and are potentially more toxic. To overcome this challenge, we have developed a novel approach for patients to compound and administer IV ampicillin in the outpatient setting. This approach allows the patient to prepare a single ampicillin 30 mg/mL solution to be administered via elastomeric pump over 24 hours.

Objective: To determine the feasibility and impressions of a layperson preparing a continuous infusion elastomeric ampicillin infusion in the outpatient setting.

Methods: Ten adults without prior experience handling or reconstituting IV admixtures will be recruited by the primary investigator. Demographics including age, gender, and past profession will be collected. Each participant will receive structured education on the noted procedure prior to study participation. Participants will then be provided with the required supplies and asked to replicate the procedure under the observation of the primary investigator. The primary investigator will note if the participant deviates from the procedure and any derivation will be assessed. Participants will subsequently be provided a one question survey following completion to assess their impression of the preparation process. Answers will be evaluated using a likert-type scale between 1 and 5. All data will be presented using descriptive statistics, including number with percentage and median with interquartile range.

Results: Results Pending

Conclusions: Conclusions Pending

ANTIBIOTIC PRESCRIBING PATTERNS FOR URINARY TRACT INFECTIONS WITHIN EMERGENCY DEPARTMENT AND URGENT CARE SETTINGS

Maddali N*, Fedorenko M, Cantin A, Koshy S, Eiting E

Mount Sinai Beth Israel, First Avenue at 16th Street, New York, NY 10003

Background: Urinary tract infections (UTI) are a common reason for emergency department (ED) and urgent care (UC) visits. Due to the high patient volume and rapid turnover in the ED and UC, many patients are given empiric antimicrobial therapy and discharged before cultures are finalized. Oral fluoroquinolones are commonly prescribed due to their broad-spectrum of activity and convenience of once to twice daily dosing. However, fluoroquinolones have several black box warnings and it is recommended to avoid use for treatment of uncomplicated UTIs because the risk of serious side effects outweigh the benefits of treatment in these patients. Although antibiotic prescribing practices for treatment of UTI has been assessed in the ED, data is limited in the urgent care setting.

Objective: The objective of this present analysis was to investigate and compare antimicrobial prescribing practices for the treatment of UTI in the ED and UC at an urban hospital that has both an ED and a nearby, off-site UC that shares the same providers.

Methods: This was a non-interventional, retrospective chart review of patients who were admitted to the Mount Sinai Beth Israel ED or Mount Sinai Union Square UC between January 1, 2018 and June 30, 2018.

Results: In progress

Conclusions: In progress

UTILITY OF METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* POLYMERASE CHAIN REACTION NARES SCREENING IN THE DE-ESCALATION OF EMPIRIC VANCOMYCIN FOR SUSPECTED PNEUMONIA

Malhotra K, Maniara B, Quarishi W, Friedman M

Kingsbrook Jewish Medical Center, 585 Schenectady Ave, Brooklyn, NY 11203

Background: Patients who present with hospital-acquired pneumonia (HAP) or ventilator-associated pneumonia (VAP), and certain patients with community-acquired pneumonia (CAP), may qualify for use of empiric anti-methicillin-resistant *Staphylococcus aureus* (MRSA) therapy. The HAP/VAP and CAP guidelines do not provide guidance for de-escalation of anti-MRSA agents. MRSA nares screenings provide an accurate, cost-effective, and rapid way to potentially de-escalate empiric anti-MRSA therapy in patients presenting with signs and symptoms of pneumonia.

Objective: To determine whether MRSA nares screening can be used to de-escalate inpatient empiric anti-MRSA therapy.

Methods: All patients who were empirically started on vancomycin or linezolid for CAP/HAP were screened. Subjects from June 2018 to April 2018 were included in the pre-implementation group. Subjects from May 2019 to July 2019 were included in the post-implementation group. Patients were excluded if they had any positive culture for MRSA within 12 months prior to admission, or if they had any current extra-pulmonary indications for anti-MRSA therapy. Patients were included in the post-implementation group if they had a MRSA nares swab collected. The primary outcome is duration of anti-MRSA therapy. Chi-square will be used for nominal variables and *t*-test will be used for continuous variables. This study was approved by Kingsbrook Jewish Medical Center's Institutional Review Board.

Results: In progress

Conclusions: In progress

EVALUATION OF FOUR-FACTOR PROTHROMBIN COMPLEX CONCENTRATE USE IN PATIENTS WITH CHRONIC LIVER DISEASE

Mandel J*, Ahmad, S, Lee S

North Shore University Hospital, 300 Community Drive, Manhasset, NY 11030

Background: Chronic liver disease causes an imbalance of coagulant factors leading to changes in hemostasis. Reduced procoagulant factors result in increased coagulation time and bleeding risk. Four-factor prothrombin complex concentrate (4F-PCC) contains nonactivated vitamin-K-dependent coagulation factors. It is increasingly being used to help manage bleeding in patients with chronic liver disease. Some literature has found the agent to be superior to fresh frozen plasma (FFP).

Objective: The objective of this study is to evaluate the efficacy of 4F-PCC relative to FFP at reducing INR for treatment and prophylaxis of bleeding in patients with chronic liver disease. The primary outcome is time to INR reversal (defined as INR < 1.5). Secondary outcomes include thromboembolic event occurrence, all-cause mortality, and hospital length of stay.

Methods: This is a single-center, retrospective cohort study. Inclusion criteria are patients with chronic liver disease, identified by selected diagnosis codes, which received 4F-PCC or FFP. Patients were excluded if they received both agents within 24 hours, or if they had no documented INRs.

Results: Results pending

Conclusion: By comparing rates of INR reduction of 4F-PCC with FFP, we aim to further identify preferred agents that should be considered for urgent reversal of bleeding or prophylaxis in patients with chronic liver disease, taking into consideration adverse effects and cost-effectiveness.

IMPACT OF PHARMACY-NURSING COLLABORATION TO OVERSEE KNOWLEDGE BASED MEDICATION ADMINISTRATION USE IN HOSPITALS

McArdle M*, Kang K, Cahill P, Schiller L, Casimir L, Rose C

BronxCare Health System, 1650 Grand Concourse, Bronx, NY 10457

Background: Barcode medication administration systems, such as Knowledge Based Medication Administration (KBMA), are electronic scanning systems shown to be remarkably effective in reducing medication errors at the point of administration. Due to this, Leapfrog recommends that hospitals maintain a goal of 95% compliance with barcode medication administration. In order to improve the current compliance rate of 82%, BronxCare Health System (BCHS) initiated a quality improvement project in October 2018 that formed a team consisting of pharmacists and nurses to oversee KBMA compliance at BCHS. Strategies used to improve compliance included running daily reports that tracked and trended individual nurse compliance, ensuring medication barcodes were programmed into KBMA database, following-up on scanning equipment maintenance, and reinforcing KBMA workflow through education and training. This study was conducted to determine the impact of the newly formed pharmacy-nursing collaboration on KBMA compliance throughout BCHS.

Objective: To improve compliance with KBMA scanning at the bedside prior to administration of medications.

Methods: Retrospective, single-center, pre-post observational cohort study to assess the newly implemented pharmacy-nursing collaboration to oversee KBMA use at BCHS. KBMA scanning compliance rates from November 2018 to January 2019, a time period the collaborative team was in place, were compared to KBMA scanning compliance rates from November 2017 to January 2018.

Results: There was a statistically significant improvement in KBMA compliance during the time period the quality improvement initiative was in place (82% vs. 96%, $p < 0.0001$).

Conclusion: The implementation of a collaborative team involving pharmacists and nurses was associated with an increased rate of compliance with KBMA scanning.

EFFECT OF SENSIVEST-DRIVEN DIURETIC CHANGES ON HEART FAILURE ADMISSIONS

McCabe P*, Feitell S, Karnes A, DeLucenay A

Rochester Regional Health, 1425 Portland Ave, Rochester, NY, 14621

Background: Heart failure (HF) is one of the most costly and deadly diseases in the US, with an estimated cost of \$30.7 billion annually and a 5-year mortality rate of 50%.

Fluid status monitoring devices have potential to reduce hospitalizations through assessment of fluid status before a patient experiences symptoms. The Remote Dielectric Signaling (ReDS) device, referred to as the Sensivest, uses low power electromagnetic signals to non-invasively measure lung fluid volume. There is limited data regarding its use in ambulatory care settings.

This study aims to evaluate trends in the use of the Sensivest in outpatient settings and determine if subsequent treatment decisions prevented HF hospitalizations.

Objective(s):

Primary: Reduction in hospital admissions

Secondary:

- Reduction in 30-day readmissions
- Reduction in ED visits
- Acuity of treatment changes
- Percentage of treatment changes made remotely

Methods: This institutional review board approved retrospective chart review will be performed in patients who received an outpatient Sensivest reading between 1/1/2018 - 12/31/2018. The electronic medical records of patients over 18 years old with symptomatic HF in two Rochester Regional Health outpatient settings will be reviewed. For patients with a reading(s), demographic data, heart failure variables, and the presence of ACC/AHA 2017 HF Guideline-directed medication therapy will be gathered. For each reading, location, subsequent treatment changes, and HF admissions or ED visits will be gathered. Results will be compared to admission data for the general system population.

Results: In progress

Conclusions: In progress

IMPACT OF PHARMACY INTERVENTION ON INAPPROPRIATE USE OF STRESS ULCER PROPHYLAXIS IN THE INTENSIVE CARE UNIT

McCarthy M*, Rice S, Vink T

Mercy Hospital of Buffalo, 565 Abbott Rd, Buffalo, NY 14220

Introduction/Background: The ASHP therapeutic guidelines on stress ulcer prophylaxis (SUP) help health care providers to identify appropriate candidates for prophylactic therapy in the ICU. Although the guidelines outline appropriate candidates, SUP is overutilized and continued throughout hospitalization once transferred from the ICU. Continuing SUP can lead to increased health care costs and increased morbidity. This study was conducted to determine the impact of pharmacy intervention on reducing inappropriate use of stress ulcer prophylaxis in the ICU.

Objective: The primary outcome was change in inappropriate SUP use from baseline to intervention. Percent of SUP continued to medicine floors was also evaluated. Patients were excluded if they were receiving an acid suppressive agent for any treatment purposes.

Methods: This was a prospective, single-center study designed to evaluate effectiveness of pharmacy intervention on reducing inappropriate use of SUP during the first six weeks of 2019. Retrospective analysis was conducted during January 2018 to match patient population and determine baseline SUP use. Pharmacy intervention included reviewing each patient for appropriateness of SUP, discontinuing SUP if not indicated and when no longer indicated, and ensuring SUP is discontinued before transferring to a medicine floor. This study was approved by the Catholic Health System Institutional Review Board.

Results: In progress

Conclusion: In progress

THE IMPACT OF TELEHEALTH PHARMACIST COUNSELING ON HIGH-RISK PATIENT POPULATIONS

Middlebrook G*, Snead J, Efird L, Shyh GI, Maltz HC

NewYork-Presbyterian Hospital Department of Pharmacy 525 East 68th Street, New York, NY 10065

Background: Hospitalization and subsequent discharge home often involve change in medication regimens. Inadequate counseling related to these changes can lead to a low level of satisfaction and an increased risk for medication error among patients. Pharmacists have an opportunity to impact the care of high-risk patients post-discharge by providing education through telehealth counseling. This service can improve patient satisfaction, reduce readmissions, and prevent medication related adverse events.

Objectives: The primary objective of this study is the percentage of counseled patients that receive a pharmacist intervention. The secondary objectives include 1) the difference in 30-day readmission in patients who received post-discharge counseling compared to patients who did not receive counseling and 2) HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) survey answers with “ALWAYS” compared with any other response.

Methods: This is a single-center retrospective study approved by the institutional review board that consists of adult patients with a high risk of adverse events. These patients were identified to receive post-discharge counseling and are being compared to patients who did not receive counseling. The sample size required to meet a two-sided 95% confidence interval is 169 patients. The primary outcome will be calculated via binomial proportions and the secondary outcomes will be analyzed with 1) two-sample t-test and 2) chi-square test.

Results: In progress

Conclusions: In progress

CHARACTERIZING PRESCRIBING PRACTICES OF DAPTOMYCIN AND CEFTAROLINE IN A TERTIARY CARE HOSPITAL

Miller M*, Ferri D, Kennicutt J

St. Peter's Hospital Department of Pharmacy, Albany, NY 12208

Background: In an effort to limit antibiotic overuse and the emergence of resistance, St. Peter's Hospital has established special use guidelines to govern prescribing of certain antibiotics, including ceftaroline fosamil and daptomycin. These antibiotics are intended to be reserved for when therapy with vancomycin and/or linezolid fails.

Objective: To characterize adherence to ceftaroline and daptomycin restriction criteria.

Methods: This study consists of two phases. The first completed phase was a retrospective review using data collected from June 2016 through July 2017. The results showed opportunities for improvement and were presented to the infectious disease physicians in an effort to improve prescribing practices. The second phase is ongoing and is a concurrent review post-education and post-implementation of new daptomycin restriction criteria to assess whether adherence has improved. All adult inpatients treated with daptomycin and/or ceftaroline between May 5th 2018 and May 31st 2019 will be included. Data extracted will include sufficient patient data to determine appropriateness of initial therapy based on the special use guidelines and only information readily available from the electronic medical record will be assessed. The primary endpoint will be the percentage of daptomycin and/or ceftaroline orders that conformed. Secondary endpoints will include rationale for use outside of best-practice criteria, percent of conforming orders initiated by infectious diseases specialists, infection type, pathogen isolated, and appropriateness of antimicrobial dose. This study has been reviewed and approved by our institutional review board.

Results: Pending.

Conclusions: Pending.

ASSESSING THE EFFECTIVENESS OF EDUCATIONAL MEDICATION CARDS IN IMPROVING COMMUNICATION ABOUT MEDICATIONS AND HOSPITAL SURVEY SCORES

Mody R*, Knight E

Montefiore Nyack Hospital, 160 North Midland Avenue, Nyack, NY 10960

Introduction: Favorable hospital survey scores can have a significant impact on the reputation of a hospital and lead to better reimbursement from government programs. Patients who receive a survey from Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) are asked to provide feedback on the communication that hospital staff provided about medications. Literature assessing the impact of providing patients with supplemental educational material to improve medication communication is limited.

Objectives: The primary objective of this study is to develop educational materials that improve patient survey responses regarding medication communication.

Methods: An Institutional Review Board (IRB) approved, prospective cohort study was conducted on a medical/surgical unit at a community hospital. In addition to routine communication with nursing, educational medication cards were designed and provided to patients by a pharmacist based on the medications that they were receiving during their hospital stay. Hospital-conducted post-discharge surveys were conducted and compared to survey scores from a predetermined baseline period and HCAHPS scores from similar periods. The primary outcome was to evaluate changes in survey responses regarding medication communication and a secondary outcome was to identify whether correlations exist between the survey two types.

Results: In progress

Conclusions: In progress

PHARMACIST DRIVEN INTERVENTION USING SPIRONOLACTONE IN HEART FAILURE WITH PRESERVED EJECTION FRACTION

Niewiadomska, O*, Yousefzadeh, N, Pasternak, A, Maccaro, P

Huntington Hospital, 270 Park Avenue, Huntington, NY 11743

Background: Heart failure remains a public health concern due to high readmission rates, morbidity, and mortality. Most medical therapies for heart failure were limited to patients with reduced ejection fraction until the 2014 TOPCAT trial, which looked at the use of spironolactone in heart failure with preserved ejection fraction (HFpEF). Though the TOPCAT trial did not meet its primary composite endpoint, it did illustrate a significant reduction in hospitalizations associated with spironolactone treatment. Spironolactone currently holds a class IIb recommendation for use in HFpEF to prevent hospitalizations in the 2017 ACC/AHA/HFSA Focused Update of the 2013 Heart Failure Guidelines.

Objective: This is an IRB-exempt, quality improvement study which aims to improve the short-comings seen in the 2014 TOPCAT trial by implementing a pharmacist driven screening process, discharge counseling and post hospital discharge follow-ups through telephone calls to illustrate the impact a pharmacist may have on decreasing hospitalizations in HFpEF patients.

Methods: Patients who were discharged with a primary diagnosis of heart failure between January to July 2018 were reviewed retrospectively and screened for spironolactone eligibility to assess prescribing patterns. In-services targeting cardiologists were initiated. Prospective data collection began November 2018 and will extend to May 2019. The sample used in the prospective intervention period is obtained through a hospital-generated list of patients admitted for heart failure exacerbation. Adult patients diagnosed with HFpEF (LVEF \geq 45%) with serum potassium $<$ 5.0 mmol/L were included in the analysis.

Results/Conclusions: Results and conclusion in progress.

PHARMACIST-LED MEDICATION EDUCATION: AN ANALYSIS OF THE INFLUENCE ON HCAHPS SCORES, READMISSIONS, AND UTILIZATION OF THE HOSPITAL OUTPATIENT PHARMACY

Nisenzon RA*, Piotrowski A, Nowierski PT

Lenox Hill Hospital, 100 East 77th Street, New York, NY 10075

Background: Patient satisfaction in the hospital setting is an important component for the institution, and for patient outcomes. It has the potential to influence medication adherence and readmission rates. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey contains several questions pertaining to medication use. Pharmacist-led medication education on discharge can improve transitions of care, while possibly increasing HCAHPS scores.

Objective: To assess the impact of two methods of transitions of care on improvement in patient satisfaction scores, readmission rates, and utilization of an on-site outpatient pharmacy.

Methods: This is a prospective study conducted at Lenox Hill Hospital on a single adult internal medicine unit. Patients meet inclusion criteria if their planned disposition is home. In the first phase of this study, a pharmacist provided discharge education on any new medications, as well as certain home medications which are part of the pharmacy's medication education initiative. In an effort to alleviate the discharge process, patients were offered the opportunity to have any new medication upon discharge to be filled at the hospital's outpatient pharmacy. In order to assess adherence, address any issues with the medication regimen, and encourage completion of the HCAHPS survey, patients were contacted one to two weeks post discharge via telephone. In the second phase, patients only received a phone call, within a week post discharge; however, the three components of the post discharge phone call are still performed. Informed consent was obtained for all patients.

Results: Results pending

Conclusions: Results pending

EVALUATION OF DOSING STRATEGIES FOR 4-FACTOR PROTHROMBIN COMPLEX CONCENTRATE FOR URGENT VITAMIN K REVERSAL: A SINGLE CENTER RETROSPECTIVE REVIEW

Pangburn K* , Luker C, Waller L

St. Peter's Hospital 315 S Manning Blvd, Albany, NY 12208

Background: There are differing opinions among clinicians on optimal dosing strategies of 4-factor prothrombin complex concentrate (PCC) for the emergent reversal of bleeding due to vitamin k antagonists (VKA). Therefore, an important opportunity exists to compare the safety and efficacy of dosing strategies. During 8/1/14-5/31/18, St. Peter's Hospital utilized weight based dosing per FDA recommendations. As of June 1, 2018 St. Peter's Hospital has transitioned to fixed dose recommendations

Objective: The objective of this study is to evaluate the safety and efficacy of PCC given per Food and Drug Administration (FDA) weight based recommendations for patients with acute major bleeding or need for an urgent surgery/invasive procedure at St. Peter's Hospital (SPH).

Methods: The study is a retrospective, single-center, chart review of patients treated with PCC from 8/1/14-5/31/18. This study was reviewed and accepted by the institutional review board. The following data will be collected: medical record number, admission/discharge date, age, gender, weight, dose ordered/administered, indication for VKA, baseline INR, indication for PCC, location of administration of PCC, co-administration with vitamin K / fresh frozen plasma, post PCC INR, time to post PCC INR, bleeding control post PCC, re-admission within 30 days, death, adverse effects, and cost. Descriptive statistics will be used to analyze patient demographics and baseline characteristics. The safety and efficacy of weight based dosing will be reported for this phase of the study and will later be used in phase 2 of the study to compare with fixed dose strategies.

Results: Results pending

Conclusions: Results pending

TWICE VERSUS THRICE DAILY UNFRACTIONATED HEPARIN FOR VENOUS THROMBOEMBOLISM PROPHYLAXIS IN CRITICALLY ILL PATIENTS

Davis N*, Altshuler J, Paris D, Musallam N, Pao K

Mount Sinai Beth Israel, 281 1st Avenue, New York, New York 10003

Background: Venous thromboembolism (VTE) is a common complication associated with increased morbidity and mortality in critically ill patients. Unique risk factors, such as prolonged immobilization, mechanical ventilation, and invasive tests and procedures predispose this population to higher rates of VTE. Either twice daily dosing (BID) or thrice daily dosing (TID) of unfractionated heparin is commonly used for VTE prophylaxis; however, head to head trials comparing the different dosing strategies are lacking. A meta-analysis conducted in non-critically ill patients found no difference between the alternative dosing on rates of VTE, bleeding, or mortality, but it is unclear if this study could be extrapolated to the critically ill.

Objective: The objective of this prospective, open label study is to determine the incidence of venous thromboembolism (VTE) for patients admitted to the intensive care unit administered unfractionated heparin (UFH) 5000 units subcutaneous (SQ) every 8 hours versus 5000 units SQ every 12 hours.

Methods: Patients receiving unfractionated heparin (BID or TID) for VTE prophylaxis will be identified if they were admitted to the medical ICU (MICU) from 12/1/17 until 1/15/19 at Mount Sinai Hospital (MSH) or at Mount Sinai Beth Israel (MSBI). Adult patients (≥ 18 years of age) with an expected MICU stay of 72 hours or more will be included. Patients will be excluded if they receive alternative prophylaxis besides SQ heparin, have a VTE diagnosis on admission, or are pregnant.

Results: In progress

Conclusion: In progress

IMPACT OF DELAYING FLUOROQUINOLONE PROPHYLAXIS IN ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION FROM DAY 0 TO NEUTROPENIA ON PATIENT OUTCOMES

Park D*, Patel S, Kim S, Levine J, Steinberg A, Jacobs S, Yum K

The Mount Sinai Hospital, 1 Gustave L. Levy Place, New York, NY 10029

Background: Infections are one of the most common causes of mortality in allogeneic hematopoietic stem cell transplant (HSCT) patients. Although several guidelines recommend the use of fluoroquinolone prophylaxis, the exact time of initiation varies. Optimizing the duration is clinically important because prolonged fluoroquinolone use can lead to *C. difficile* infections and antibiotic resistance.

Objective: This study evaluated the potential impact of delaying the initiation of fluoroquinolone prophylaxis from day 0 to day of neutropenia in order to minimize adverse effects while still providing adequate antibacterial coverage in allogeneic stem cell patients.

Methods: This IRB approved, single-center, retrospective chart review assessed the practice change that was implemented at our institution in July 2017. Fluoroquinolone prophylaxis for the allogeneic HSCT recipients was changed from starting at day 0 to starting when the patients became neutropenic, defined as an absolute neutrophil count (ANC) of 500 cell/mm³ or fewer. All eligible patients were divided into two treatment arms, PRE for those who received the transplant prior to the change and POST for those who received the transplant after the change. The primary outcome is the incidence of febrile neutropenia requiring empiric, broad-spectrum antibiotics. Secondary outcomes include duration of fluoroquinolone prophylaxis, incidence of *C. difficile*-associated diarrhea, incidence of infections, incidence of sepsis requiring transfer to the intensive care, incidence of graft versus host disease, length of hospital stay, and mortality.

Results: in progress

Conclusion: in progress

EVALUATION OF PRESCRIBING PATTERNS OF DIRECT ORAL ANTICOAGULANTS AT AN ACADEMIC MEDICAL CENTER

Phillips S*, Maceira E, Zhou Y

Albany Medical Center, 43 New Scotland Avenue, Albany, NY 12208

Albany College of Pharmacy and Health Sciences, 106 New Scotland Avenue, Albany, NY 12208

Background: Non-standard dosing of direct oral anticoagulants (DOAC) has been associated with poor patient outcomes, up to 10.5 times the risk of stroke or recurrent deep vein thrombosis. Prior studies have estimated the prevalence of non-standard dosing to be 20-33% in atrial fibrillation and 50% in venous thromboembolism treatment.

Objective: To determine incidence of non-FDA approved DOAC dosing. The secondary outcome was to determine if there are any factors associated with non-FDA approved dosing.

Methods: An IRB-approved retrospective chart review of all inpatients who received a DOAC for an FDA approved therapeutic indication between May 1st, 2018 and July 23rd, 2018 was conducted. FDA approved dosing was defined according to their respective package inserts. Results were analyzed using descriptive statistics, t-test, and Chi-square, when applicable.

Results: A total of 947 patients were analyzed. Apixaban was the most commonly ordered DOAC, 78%. The most common indication was atrial fibrillation, 74%. The overall incidence of non-FDA approved dosing was 14%, with the majority, 82%, deemed as underdoses. Variables associated with non-FDA approved dosing were: older age, lower weight, higher serum creatinine, lower creatinine clearance, and prescription by the vascular service ($p < 0.001$).

Conclusion: The incidence non-FDA approved DOAC dosing at AMC is lower than reported in the literature. Knowledge of associated variables will allow for targeted education to improve dosing compliance. In addition, it will be used to identify DOAC candidates who are at risk for non-standard dosing to allow for early intervention and prevent delay of therapy.

SAFETY AND EFFICACY OF KCENTRA FOR THE REVERSAL OF ORAL FACTOR XA INHIBITOR-ASSOCIATED BLEEDING

Raymond L*, Ho C, Nisanyan L, Rosenberg D, Chionchio A, Lee M

Long Island Jewish Medical Center, 270-05 76th Avenue, New Hyde Park, NY 11040

Background: Oral factor Xa (FXa) inhibitors may be reversed by andexanet alfa or Kcentra. However, the widespread use of andexanet alfa is limited by cost. Therefore, there remains a role for Kcentra in the reversal of oral FXa inhibitor-associated bleeding. There is currently limited data in the form of small observational studies that assess the effectiveness of Kcentra and its risk of thromboembolic events.

Objective: The purpose of this multicenter retrospective study was to determine the safety and efficacy of Kcentra when used for the reversal of oral FXa inhibitor-associated bleeding.

Methods: This Institutional Review Board approved study was a retrospective chart review of all adult patients who received Kcentra between May 2017 and December 2018 at Northwell Health hospitals. Patients were included if they received Kcentra to reverse rivaroxaban, apixaban or edoxaban in the setting of a bleeding event. Patients were excluded if they received Kcentra in the absence of a bleed for anticoagulant reversal prior to emergent procedure or surgery. The primary efficacy outcome was based on predefined criteria for effective hemostasis in visible, non-visible (e.g., gastrointestinal, genitourinary), and intracranial bleeds. The principal safety outcome was a composite of thromboembolic events including myocardial infarction, pulmonary embolism, deep vein thrombosis, and cerebrovascular accident occurring within 30 days of Kcentra administration.

Results: Pending

Conclusions: Pending

USE OF ADJUNCTIVE AZITHROMYCIN FOR SURGICAL PROPHYLAXIS IN NON- ELECTIVE CESAREAN SECTIONS

Regis T*, Saraiya N, Shukla H, Chen V

Montefiore Medical Center, 111 East 210th Street, Bronx, NY 10467

Background: To facilitate azithromycin surgical prophylaxis in patients undergoing non-elective cesarean sections, without unrestricting azithromycin in all patients, Montefiore Medical Center implemented a two-step ordering process in our electronic health record system. First, a screening checklist for obstetrics/gynecology providers directed azithromycin use to select patients. Second, an indication was built to bypass antimicrobial stewardship approval, allowing for faster pharmacist verification and nursing administration.

Objectives: Our main objective is to ensure that all eligible patients who undergo non-elective cesarean sections receive azithromycin for surgical prophylaxis. Our secondary objective is to reduce post-operative infection rates by 50% in eligible patients.

Methods: This performance improvement evaluation utilized de-identified retrospective data- mining reports from our electronic health record to identify patients who underwent a non- elective cesarean delivery between September 2017 and March 2018. This project was exempted from Montefiore Institutional Review Board approval. A random sample of 20 patients per month were included from Montefiore Medical Center's Einstein and Wakefield campuses. We collected the following parameters: appropriate indication, correct dosing, correct duration, correct service, and appropriate time to administration in relation to cesarean section. Patient data will be reviewed by the investigators for compliance with our obstetrics protocol. Noncompliance will be defined as an order not meeting any one of the above parameters. Each noncompliant order will be reviewed to determine what factors may have contributed to noncompliance. Based on the study findings, improvements will be recommended to internal committees to improve the care of our patients.

Results: Results pending

Conclusions: Results pending

ASSESSING THE IMPACT OF AN OPIOID RISK TOOL (ORT) IMPLEMENTED BY MEDICAL RESIDENTS ON THEIR OPIOID PRESCRIBING HABITS

Reinhardt B*, Wojciechowski A

Niagara Falls Memorial Medical Center, 621- 10th Street, Niagara Falls, NY 14301

Background: The US Department of Health and Human Services estimates that on average 650,000 opioid prescriptions are written daily. Center of Disease Control guidelines state prescribers should assess patient-risk associated with opioid use. This study evaluated the impact the Opioid Risk Tool (ORT) had on the opioid prescribing habits of medical residents at Niagara Falls Memorial Medical Center (NFMCC).

Objective: The primary outcome studied was oral morphine equivalent daily defined doses. Secondary outcomes included assessment of NFMCC resident attitudes towards the ORT, and whether ORT scores would vary based on whether the ORT be completed via patient interview versus chart review.

Methods: This was a retrospective, single-center pre-post observational cohort study to assess the implementation of an ORT quality improvement measure. Medical residents implemented the ORT into their patient assessment (10/1/2018- 02/28/2019) and their prescribing habits were compared to a historical cohort of medical residents from the year prior. To assess the attitudes towards the ORT, a survey was completed by the medical residents. The study was approved by the Institutional Review Board.

Results: In Progress

Conclusions: In Progress

EVALUATION OF EMPIRIC INSULIN GLARGINE DOSE REDUCTION ON INPATIENT HYPOGLYCEMIC AND HYPERGLYCEMIC EVENT RATES

Robinson R*, Zuern A, Miller C, Seabury R, Darko W, Probst LA

Upstate University Hospital, 750 E. Adams Street, Syracuse, NY 13210

Background: Both hyperglycemic and hypoglycemic events in the hospital can lead to increased cost, length of stay, morbidity, and mortality. When diabetic patients are admitted to the hospital, their insulin requirements likely differ from their home doses due to factors such as diet, ambulation and severity of illness. Despite limited recommendations to modify home insulin doses of diabetic patients admitted to the hospital, specific guidance is lacking to guide a consistent implementation of this practice. At our institution, we have adopted a policy that supports an empiric 20% home dose reduction of insulin glargine among adult patients admitted to the hospital.

Objective: To compare the rates of hypoglycemic and hyperglycemic events among hospitalized patients who either continue their home insulin glargine dose or have their dose empirically reduced by 20%.

Methods: The study is retrospective and non-interventional. Patient eligibility includes hospitalized adult patients at Upstate University Hospital with home insulin glargine that is continued during hospitalization. A structured data collection form is being utilized to collect data including patient demographics, hemoglobin A1C, home and inpatient diabetes regimen including all insulin and oral hypoglycemic medications, percent dose reduction, pharmacist interventions, blood glucose measurements, and administration of rescue medications for hypoglycemia. Our analysis determined that 113 patients in each arm is required to achieve 80% power. Data analysis will be performed using SPSS. Continuous data will be compared using the Mann Whitney U test and categorical data will be compared using Chi square. IRB exemption was granted.

Results: Pending

Conclusions: Pending

COMPARATIVE EVALUATION OF ERTAPENEM AND CLINDAMYCIN PLUS GENTAMICIN FOR THE TREATMENT OF POSTPARTUM ENDOMETRITIS

Schweiger K*, Doan T, Donaghy H, Meirowitz N

Long Island Jewish Medical Center, 270-05 76th Ave, New Hyde Park, NY 11040

Background: Postpartum endometritis is the most common cause of maternal fever immediately following childbirth. This condition involves the contamination of uterine tissues by aerobic and anaerobic vaginal microorganisms. Clindamycin plus gentamicin has been the most effective regimen for the treatment of this infection. With a similar spectrum of coverage, ertapenem is an attractive alternative antibiotic with once daily dosing.

Objectives: The purpose of this study is to evaluate the efficacy of ertapenem for the treatment of postpartum endometritis compared to clindamycin plus gentamicin.

Methods: This study was approved by the institutional review board and does not require informed consent. A retrospective chart review will be conducted evaluating all female patients admitted to the OB/GYN service of Long Island Jewish Medical Center who were treated with either ertapenem or clindamycin plus gentamicin for a listed indication of “endometritis” during July 2017 to July 2018. Those who received both treatment arms at any time or received the study agents for other indications will be excluded. All data will remain de-identified. Data to be collected include: patient demographics (patient age, weight, height, gestational age, type of delivery, and group B streptococcal screen status), duration of labor, premature rupture of the membranes, duration of antibiotics, appropriateness of dosing, time to defervescence, and overall length of stay. Secondary outcomes include a cost analysis of the two treatment arms and evaluation of the appropriateness of therapy (i.e. correct weight based dosing, timeliness of administration).

Results: Research in progress

Conclusion: Research in progress

PROCESSING MEDICATION ORDERS IN THE GERIATRIC POPULATION: ARE WE USING ENOUGH CAUTION? RESULTS OF A MULTI-CENTER SURVEY

Scrimenti A*, Probst LA, Miller CD, Noviasky JA, Ulen KR, Seabury RW

Upstate University Hospital, 750 E Adams St, Syracuse, NY 13210

Background: It is thought that hospital pharmacists may use more caution and resources when processing pediatric versus geriatric medication orders, however, currently there is no literature describing this.

Objective(s): The objectives were to identify whether pharmacists utilize more caution when processing geriatric or pediatric medication orders, characterize the frequency pharmacists utilize drug information resources when processing geriatric and pediatric orders, and assess the level of importance of guidelines for medication error prevention when processing geriatric and pediatric medication orders.

Methods: A 26-item electronic survey was created and distributed to participating Vizient® pharmacy directors, with the request of further dissemination to their pharmacists. The survey was re-sent at 2-week intervals on two occasions. This study was exempt from IRB review.

Results: A total of 173/271 pharmacists completed the survey, for a final response rate of 63.8%. Most pharmacists stated they utilize more caution when verifying pediatric medication orders (125/172, 72.7%). Pharmacists report they were 4.156 times more likely to refer to a drug information resource for $\geq 50\%$ of pediatric orders versus geriatric orders (pediatric: 118/171, 69.0% vs. geriatric: 59/172, 34.3%, $p < 0.001$; OR (95%) 4.156 (2.647 – 6.524). Lastly, pharmacists familiar with the guidelines were 2.28 times more likely to state the pediatric guideline was very important (pediatric: 51/171, 29.8% vs. geriatric: 27/172, 15.7%, $p = 0.002$; OR (95% CI): 2.28 (1.35 – 3.86)).

Conclusions: A similar level of caution, drug information, and guideline utilization that exists when processing pediatric medication orders is needed for the geriatric population in order to provide safe and comprehensive care.

USING MIDODRINE TO WEAN HYPOTENSIVE PATIENTS OFF IV VASOPRESSORS

Selwaness M*

Southside Hospital, 301 E Main Street, Bayshore, NY 11706

Background: Severe hypotension and shock are life-threatening conditions that can lead to multi-organ failure and death. Intravenous (IV) fluids and IV vasopressors are essential components to patient management. However, the administration of IV vasopressors requires a central venous line and intensive care unit (ICU) monitoring due to risk of arrhythmias and other potential complications. Discontinuation of IV vasopressors can minimize side effects and possible complications and allow for ICU discharge. Midodrine, an oral alpha agonist, has been increasingly used as an off-label vasopressor sparing agent. The overall goal of midodrine administration is to reduce duration of IV vasopressor treatment, minimize vasopressor side effects, and decrease length of stay.

Objective: The primary outcome is to evaluate the time to IV vasopressor discontinuation. Secondary outcomes include a comparison between both arms for the following: ICU length of stay, change in mean arterial pressure (MAP) at the time of IV vasopressor initiation and discontinuation, and cost effectiveness.

Methods: This is a single center, retrospective, observational study to evaluate the association between the use of midodrine and the ability to wean off IV vasopressors. Data was collected using the electronic medical records for eligible patients based on the inclusion and exclusion criteria. IRB approval was obtained prior to the initiation of data collection.

Results:

In-Progress

Conclusion:

In-Progress

IMPLEMENTATION OF A NEWLY DEVELOPED ANALYTICAL TOOL TO BE USED BY A MANAGED CARE PLAN TO DESCRIBE UTILIZATION TRENDS OF BENZODIAZEPINES

Shah S*, Thomas T, Lopata J

Capital District Physicians' Health Plan, 500 Patroon Creek Blvd, Albany, NY 12206

Background: Benzodiazepine related overdoses have quadrupled between 1999 and 2010. Concurrent use of benzodiazepines and opioids accounts for nearly 30 percent of fatal opioid overdoses. It is important to recognize and assess the potential for abuse and misuse associated with benzodiazepines and implement measures to deter inappropriate use.

Objective: Identify opportunities to manage utilization of benzodiazepines by developing an analytic tool to understand trends of prescribing.

Methods: The analytic tool was designed to provide a retrospective review of pharmacy and medical claims to easily quantify trends in benzodiazepine utilization including dose, diagnoses, prescriber and concurrent medications from January 2018-June 2018. Inclusion criteria required that a member have at least one claim for a benzodiazepine excluding temazepam, triazolam and diazepam gel. An analytical dashboard was developed using relevant ICD-10 diagnosis codes and specific generic product identification (GPI) numbers of the included benzodiazepines, opioids, buprenorphine products and cerebral stimulants.

Results: There were 51,743 total claims for benzodiazepines with 18,746 unique utilizers from January 2018-June 2018. Most prescriptions were for the diagnosis of anxiety. A total of 5,318 utilizers had claims for both benzodiazepines and opioids. There were 134 documented benzodiazepine related overdoses during the study period and 105 members continued to have pharmacy claims for a benzodiazepine post the overdose date. It was also determined that 351 members were exceeding the maximum daily dose per FDA labeling.

Conclusions: The analysis of the pharmacy claims data lead to the implementation of formulary changes to manage benzodiazepine utilization among the health plan membership.

COMPARISON OF VANCOMYCIN INTERMITTENT AND CONTINUOUS INFUSION DOSING STRATEGIES ON RATES OF NEPHROTOXICITY AND CLINICAL FAILURE AMONG PATIENTS IN AN OUTPATIENT ANTIMICROBIAL THERAPY PROGRAM

Shakeraneh P*, Fazili T, Gilotra T, Steele J, Darko W, Seabury R, Miller C, Probst L, Kufel W

Upstate University Hospital, 750 East Adams St, Syracuse, NY 13210

Background: Vancomycin may be administered intravenously via intermittent infusion (II) or continuous infusion (CI). The 2011 Infectious Diseases Society of America Methicillin-Resistant *Staphylococcus aureus* guidelines recommend against CI due to a paucity of data, however, more recent data suggest reduced risk of nephrotoxicity and comparable clinical efficacy to II. CI may also be more feasible in the outpatient setting since serum concentration collection can occur at any time point during infusion rather than requiring appropriately timed trough collection with II.

Objective: The primary outcome of this study is to compare rates of nephrotoxicity in patients receiving CI and II vancomycin in an outpatient antimicrobial therapy (OPAT) program. Secondary outcomes include clinical failure rates and time to onset of nephrotoxicity.

Methods: This is a single-center, retrospective cohort study of patients ≥ 18 years receiving CI or II vancomycin as part of an OPAT program between October 1, 2017 (initiation of CI in the OPAT program) and December 31, 2018. Patients will be included if CI or II vancomycin was administered for at least one week in the OPAT program. Exclusion criteria includes patients lost to follow-up or receiving renal replacement therapy. Demographic data will be collected and propensity score matching will be performed to match groups based on age, gender, and infectious indication. Nephrotoxicity will be assessed using the Acute Kidney Injury Network Stage, RIFLE criteria, and the 2009 vancomycin consensus guidelines. Our institutional review board deemed this study exempt from full review.

Results: Pending

Conclusions: Pending

INTRAMUSCULAR KETOROLAC VERSUS ORAL IBUPROFEN FOR ACUTE MUSCULOSKELETAL BACK PAIN IN THE EMERGENCY DEPARTMENT: A PROSPECTIVE ANALYSIS

Sharabun M*, Smith AP

SBH Health System, 4422 Third Avenue, Bronx, NY 10457

Background: Acute musculoskeletal back pain is one of the leading causes of Emergency Department visits each year. NSAIDs, such as ketorolac and ibuprofen, are effective in treating acute pain and are commonly prescribed in the ED. Many patients tend to believe that IV or IM pain medications are “stronger” and provide better pain relief versus oral pain medications. Previous studies evaluating ketorolac IV/IM ketorolac and PO ibuprofen have established that both provide equivalent analgesia. However, these studies do not reflect the current prescribing practices of NSAIDs and use ibuprofen and ketorolac doses well above the established ceiling doses. Prescribing ibuprofen and ketorolac at their maximum ceiling doses can reduce the potential for side effects seen with higher doses. This study was conducted to evaluate patient perceived analgesia with ketorolac and ibuprofen at their ceiling analgesic doses.

Objective: The primary outcome was reduction in pain score after one hour of medication administration. The secondary outcome of this study was adverse drug reactions from either ibuprofen or ketorolac.

Methods: This is a prospective, randomized study comparing ketorolac 10 mg IM to ibuprofen 400 mg PO in patients presenting to an urban teaching hospital ED experiencing acute musculoskeletal back pain. Subjects will be randomized to receive ketorolac 10 mg IM and placebo suspension orally or placebo solution (0.9% sodium chloride) IM and ibuprofen 400 mg suspension orally.

Results: Pending

Conclusions: Pending

PHARMACIST-LED MULTIDISCIPLINARY DIABETES EDUCATION CLASSES FOR HOSPITALIZED PATIENTS

Shehu-Gega A*, Huggins C, Kang K, Schiller L

BronxCare Health System, 1650 Grand Concourse, Bronx, NY 10457

Background: Studies have shown multidisciplinary diabetes education has a positive impact on patient outcomes leading to decreased HgbA1Cs. At BronxCare Hospital, which serves residents of the South Bronx, where 13.9% of adults have diabetes, a pharmacy-led inpatient diabetes-focused initiative was established in December 2017. The initiative consists of twice weekly diabetes classes co-taught by pharmacists and dieticians in a classroom setting to patients admitted with newly diagnosed/uncontrolled diabetes, or persistent hyperglycemia. This research was undertaken to determine the impact of this multidisciplinary initiative on diabetes control among inpatients transitioning to an outpatient setting.

Objective: Primary outcomes were HgbA1C (initial, three, and six months post discharge), medication adherence (initial and six months post discharge), and 30-day hospital readmissions.

Methods: This was a retrospective chart review of adult patients that attended diabetes education classes from December 2017 to August 2018.

Results: Eighty-four patients attended inpatient diabetes classes during the study period. On admission, mean and median HgbA1C values were 10.68% and 10.7% respectively, which decreased to 7.44% and 7.2% three months post discharge. At six months, post discharge mean and median HgbA1C values were 8.6% and 8.2%. Further, 17/84 patients (20.2%) were readmitted to the hospital within 30 days of discharge; five readmissions were diabetes related. Data collection for medication adherence is pending completion in March 2019.

Conclusion: Among inpatients who participated in a pharmacist-led multidisciplinary diabetes education initiative, we observed decreased HgbA1Cs three months post discharge, with a slight uptrend observed at six months. We recommend continued reinforcement of diabetes education in outpatient settings.

EVALUATION OF THERAPEUTIC ENOXAPARIN DOSING USING ANTI-XA LEVELS IN AN OBESE ADULT POPULATION

Sideras V*, Naber M, Steverson K

Albany Medical Center, Albany, NY 12208-3478

Background: Venous thromboembolism, a common complication in hospitalized patients, is routinely treated with enoxaparin. Obese patients may have altered enoxaparin pharmacokinetics due to body composition. No dosing recommendation for obese patients exist given limited numbers in clinical trials. Monitoring of anti-Xa levels is recommended maximize safety and efficacy.

Objective: To evaluate the dose of enoxaparin based on anti-Xa levels in obese patients.

Methods: A retrospective, IRB approved, observational chart-review of inpatients, eighteen years and older, weighing 100kg and above with at least one anti-Xa level reported during their hospital stay was conducted. Data collection included demographics, weight, eGFR, date and time of all doses of enoxaparin administered and anti-Xa levels drawn. Exclusion criteria consisted of inappropriately timed anti-Xa levels, enoxaparin listed as a home medication, and pregnancy. The primary outcome of this study was to evaluate the appropriateness of labeled enoxaparin dosing using anti-Xa levels. Statistical analysis was performed using fisher's exact test for continuous variables.

Results: A total of 115 patients were reviewed with 63 included in the final analysis. Anti-Xa levels ranged from 0.37 unit/mL to greater than 1.3 unit/mL. An average dose of 0.96mg/kg resulted in supratherapeutic levels in 71% of patients. Therapeutic levels were attained in 9 of 45 supratherapeutic patients with an average dose of 0.65mg/kg.

Conclusions: Obese patients have elevated risk for supratherapeutic anti-Xa levels when labeled dosing is utilized. Further prospective, controlled trials are needed to identify appropriate dosing for this patient population and the clinical impact of supra-therapeutic anti-Xa levels.

COMMUNITY PHARMACIST COLLABORATION WITH A REGISTERED NURSE TO IMPROVE GUIDELINE DIRECTED THERAPY IN A PRIMARY CARE FACILITY

Snyder J*, Ahmed-Sarwar N, Gardiner C, Sutton Burke E

Wegmans School of Pharmacy and Wegmans Family Market, Inc - 3690 East Avenue, Rochester, New York 14618

Background: Community pharmacists are in a unique position as members of the healthcare team due to their frequent contact with patients. The lack of access to electronic medical records (EMRs) that most community pharmacists experience limits their ability to make therapeutic recommendations without collaboration. Despite the growing evidence of the benefits pharmacists can provide to patients with chronic diseases like diabetes, community pharmacist intervention or partnership with a primary care facility is not well documented in the literature.

Objective: To compare the proportion of patients on guideline directed therapy before and after pharmacist collaboration.

Methods: A community pharmacist was paired with a registered nurse at a primary care clinic to identify gaps in care and implement patient appropriate, guideline-directed recommendations. Pharmacy dispensing software and primary care EMR were combined to assess shared patients' diabetes management according to the most recent American Diabetes Association Standards of Care. For patients who did not meet Standards of Care, the pharmacist made recommendations for any changes/additions to therapy and created an order for the primary care physician with the registered nurse utilizing the EMR. Follow-up is planned for 1, 3, and 6 months post-recommendations. Primary outcomes include recommendation acceptance rate, proportion of patients meeting Standards of Care and patient outcomes including blood pressure and blood sugar control. This study was approved by the St. John Fisher College Institutional Review Board.

Results/Conclusions: . Results pending.

PLATELET FUNCTION P2Y12 TESTING USE IN ASSESSING THE RISK FOR HEMORRHAGE IN PATIENTS ON CLOPIDOGREL

Taylor O*, Wang S, Daggubati R, Malone B, Akerman M

NYU Winthrop Hospital 259 First Street, Mineola NY 11501

Background: Clopidogrel is a P2Y12 platelet inhibitor used to decrease the rate of cardiovascular events. Bleeding is a common adverse reaction, and platelet function P2Y12 (PFP) testing can be used as a rapid assessment of patient response to clopidogrel. This study was conducted to determine what platelet reactivity unit (PRU) values correlate with risk of bleeding.

Objectives: The primary outcome was determining whether patients with PRU ≥ 230 have lower bleed rates than patients with PRU < 230 . The secondary outcome was assessing the value of using these cut-off points to predict bleeding outcomes. Patients were excluded if < 18 years old, administered P2Y12 inhibitor other than clopidogrel, or not administered clopidogrel.

Methods: This was a single-centered retrospective chart review. Data was collected on clopidogrel dose, PRU values, blood transfusions received, and provider notes. Patients at risk for bleed were defined as PRU < 230 (per our hospital's computerized provider order entry). Subjects who had a PRU < 230 vs. PRU ≥ 230 were compared using Mann-Whitney and chi-square statistical tests. All clinical research was approved by the NYU Winthrop Hospital institutional review board.

Results: There were 117 patients included. The rate of blood transfusion was higher in the PRU ≥ 230 group as compared to the PRU < 230 group (55.9% vs. 32.8% respectively, chi-square test $p < 0.0283$).

Conclusions: The predicted PRU cut-off value for higher bleeding risk in patients on clopidogrel did not correlate with actual bleeding occurrences. PFP testing may not be a valid tool to predict bleeding risk requiring transfusion based on the findings of this study.

EXPANDING PHARMACIST DISCHARGE COUNSELING IN PATIENTS WITH HEART FAILURE: A PROCESS IMPROVEMENT INITIATIVE

Top E*, Thomas M, Maningas J, Lyttle R, Cheng-Lai A

Montefiore Medical Center – Einstein Campus, 1825 Eastchester Road, Bronx, NY 10461

Background: Pharmacists provide discharge counseling to patients with heart failure as part of a service bundle through a health system-wide initiative aimed to reduce 30-day readmission rates for patients with heart failure. The percentage of pharmacist consults completed in a typical month are variable, with an average of sixteen percent between March and September 2018. Given the time-intensive nature of consults, the pharmacy department must identify areas for improvement in the current process to reach the goal of increasing pharmacist discharge counseling for patients with heart failure.

Objective: The aim of the process improvement study is to increase the percentage of consults from 16% to 30%, of total consult requests by February 28, 2019.

Methods: An initial intervention to appoint two pharmacy managers to champion the project began September 2018. Subsequent interventions included modification of the pharmacy consult list to improve prioritization, and simplification of chart review workflow. The evaluation of completed consults was a retrospective review of a report of patients with a consult to pharmacy ordered between March 2018 and February 2019. Data was collected on order date, admission date, discharge date, and order status. This project is exempt from Institutional Review Board approval under quality improvement.

Results: Results Pending

Conclusions: Results Pending

IMPROVING THE USE OF PEDIATRIC MEDICATION TEMPLATES IN A TERTIARY HOSPITAL THAT SERVES BOTH ADULT AND PEDIATRIC PATIENTS.

Vakirtzis G*, Slavin, J, Nowierski, P.

Lenox Hill Hospital Department of Pharmacy, 100 E 77th St. New York, New York 10075

Objective: The goal of this project is to analyze compliance rates on the appropriate use of pediatric templates and identify the providers who are non-compliant. We hope to understand the barriers to utilizing pediatric templates. By increasing template compliance, we will be minimizing the risk of medication errors in this patient population (dosing, etc.). With the pediatric unit of Lenox Hill Hospital (LHH) in a pre-expansion phase, we find this to be an opportunity for improvement on template compliance.

Methods: We will be analyzing all orders verified from Lenox Hill Hospital (LHH) and Lenox Hill Greenwich Village Emergency Department (LHGV ED) in pediatric patients (<18 years old) and assessing which orders were entered with and without a pediatric template from January-June 2018. Key inclusion criteria are all patients < 18 years old, LHH medical and surgical units, LHH ED, and LHGV ED. Key exclusion criteria are all orders placed in LHH 6th floor and 2Uris. Additional data collected will include adult (≥ 18 years old) orders entered on pediatric templates. In order to target the appropriate areas to improve template use, data will be collected to determine which services and providers are linked to non-compliance.

Results: (in progress)

Pediatric Template Compliance Rates of 2018

LHGV & LHH: medical units, surgical units, and ED (excluding 2URIS & 6th floor)	January	February	March	April	May	June	July
Total number of pediatric orders	730	871	671	561	719	668	600
Compliant with pediatric template (Age≤18)	386	485	332	312	384	373	296
Compliance rate of pediatric template (%)	52.88%	55.68%	49.48%	55.61%	53.41%	55.84%	49.33%
Non-compliant pediatric with template (Age≤18)	344	386	339	249	335	295	304

Conclusion: (in progress)

Strategies to improve compliance rates:

- Educational materials to be provided to each service
- In-services for specific services/units
- Provider-specific education
- Pharmacy presence in units with high non-compliance rates
- Potential changes in Sunrise (i.e., order layout, title of orders, location in order option list, addition of pediatric convenience sets)

ORAL ANTIMICROBIAL THERAPY FOR URINARY TRACT INFECTIONS DUE TO EXTENDED-SPECTRUM BETA-LACTAMASE-PRODUCING *E. COLI*, *KLEBSIELLA PNEUMONIAE*, AND *KLEBSIELLA OXYTOCA* IN KIDNEY TRANSPLANT RECIPIENTS

Vu C*, Rana M, Saunders-Hao P, Walits E, Patel G, Adams-Sommer V

Touro College of Pharmacy / The Mount Sinai Hospital, 1 Gustave L. Levy Place, New York, NY 10029

Background: Urinary tract infections (UTIs) are a significant cause of morbidity in renal transplant recipients, and can result in graft dysfunction and failure. UTIs specifically caused by extended-spectrum β -lactamase (ESBL)–producing *Enterobacteriaceae* are increasing worldwide and often require hospitalization for short courses of intravenous antibiotics, resulting in increased healthcare spending and exposure to broad-spectrum antibiotics. While carbapenems are most widely used, there are a few *in vitro* studies suggesting a role for oral antibiotics.

Objective(s): The objective of this study is to evaluate clinical outcomes associated with oral antibiotics for the treatment of urinary tract infections due to extended-spectrum β -lactamase-producing *E. coli*, *Klebsiella pneumoniae*, and *Klebsiella oxytoca* in kidney transplant recipients.

Methods: A single center, retrospective chart review of adults receiving a kidney transplant from the Recanati/Miller Transplantation Institute between January 1, 2013 and December 31, 2017 will be conducted. Individuals who completed treatment with oral antibiotics, including step-down therapy, for urine culture-proven simple cystitis or complicated UTI due to ESBL-producing *E. coli*, *Klebsiella pneumoniae*, *Klebsiella oxytoca* will be included. Asymptomatic bacteriuria will be excluded. The electronic medical record will be utilized to collect data on demographics, comorbidities, clinical presentation, risk factors, and type of oral antibiotic regimen, including drug, dose, frequency, and duration. The primary outcome measured will be clinical cure, defined as complete resolution of symptoms without need for additional antimicrobial therapy. Secondary outcomes measured will be incidence of relapse and/or recurrence, associated hospitalizations, and mortality.

Results: in progress

Conclusions: in progress

IMPLEMENTATION OF AN INHALER EDUCATION COPD CARE PLAN FOR HOSPITAL DISCHARGE

Warunek LN*, Kersten B, Cieri-Hutcherson NE, Hassan A, Nadler J, Gozelski R

Buffalo General Medical Center, 100 High St. Buffalo, NY 14203

Background: A pharmacist driven chronic obstructive pulmonary disease (COPD) care plan focused on providing accurate inhaler education for administration before hospital discharge was implemented at Buffalo General Medical Center (BGMCM) from December 2018 through February 2019. This project received approval through the BGMCM Pharmacy and Therapeutics Committee as a quality improvement project.

Objectives: The primary endpoint of this study was a 25% reduction in errors of critical steps associated with inhaler technique after pharmacist education. Secondary endpoints included evaluation of errors associated with each type of inhaler device.

Methods: This was an interventional quasi experimental study of patients hospitalized with COPD exacerbation to assess a newly implemented pharmacist driven COPD care plan at BGMCM. Eligible patients included adults admitted with a primary diagnosis of COPD exacerbation located on the general hospital floors prior to discharge. Patients were identified based on active orders for methylprednisolone or prednisone 40mg or more with a documented indication of COPD exacerbation. Patients were excluded if they had active lung cancer, bronchiectasis, presence of an artificial airway, no true COPD diagnosis, significant dementia, experienced physical limitations preventing teaching by the researchers (language barrier, deaf, blind), lived in a nursing home or skilled living facility, or were transferred to another facility prior to discharge. The primary investigator interviewed all patients, recorded initial inhaler technique scores on validated scales, and provided education about proper device usage. Patients were reassessed within 48 hours to determine if an encounter with a pharmacist improved their inhaler administration.

Results: pending

Conclusions: pending

340B: STRATEGIES TO MINIMIZE WHOLESALE ACQUISITION COST (WAC) EXPOSURE IN MIXED-USE AREAS

Watkins K*, Stein G

The Brooklyn Hospital Center, 121 DeKalb Ave, Brooklyn, NY 11201

Background: Significant savings opportunities exist for cardiac catheterization lab medications such as bivalirudin and eptifibatide. Currently these medications are in the top 20% of all medication spending at The Brooklyn Hospital center. In order to capture the 340B accumulation for these drugs, we will create a manual data feed file to track all administrations of bivalirudin and eptifibatide. The manual data feed file will be submitted to the split-billing software vendor, Verity Solutions, and 340B qualified usage as well as GPO qualified usage will be retrospectively accounted for and credits will accumulate on both 340B and GPO accounts resulting in significant savings.

Objective: To evaluate the cardiac catheterization lab medications currently unaccounted for through the split-billing software, and the resulting savings from capturing the administrations of these medications. The primary endpoint is cost-savings associated with 340B split-billing opportunity optimization.

Methods: This study is a cross-sectional observational study using retrospective chart review at a single-center, urban community hospital.

Results: Results pending

IMPACT OF PHARMACIST EVALUATION AND DOCUMENTATION OF REPORTED PATIENT ALLERGIES AT A SMALL URBAN TEACHING HOSPITAL

Webb N*, Conway E, Wojciechowski A

Niagara Falls Memorial Medical Center, 621 10th Street, Niagara Falls, NY 14301

Background: The previous process for patient allergy assessment at this institution was performed by nursing or medical staff upon admission. A clear place for pharmacy involvement to intervene on medication allergy evaluation and documentation was observed. This ultimately led to the implementation of a quality improvement initiative, incorporating evaluation of reported allergies into the patient interview performed by pharmacy personnel.

Objective: The primary outcome is the total number of interventions made and the distribution of intervention types. The secondary outcome is an economical evaluation of projected savings specific to beta-lactam antibiotic reported allergies.

Methods: This study has been submitted to the institutional review board and has been approved. Retrospective chart review was used to collect patient specific demographics and all interventions made by pharmacists and student pharmacists on the documented allergy or allergy reactions of a patient.

Results: Results pending

Conclusions: Results pending

RETROSPECTIVE ANALYSIS OF TIME TO READMISSION FOR PEDIATRIC ASTHMATICS WHO DID OR DID NOT PICK UP INITIAL INHALER FOLLOWING ASTHMA EXACERBATION HOSPITAL DISCHARGE

White, T*, Steidl, K, Seabury, R, Darko, W, Anderson, M, Probst, L, Miller, C

Upstate University Hospital Department of Pharmacy, 750 East Adams St Syracuse, NY 13210

Background:

Asthma is one of the most common long-term diseases that affect more than 6 million children nationally. Primary non-adherence (failure to get the initial prescription filled) to asthma medications has been reported to be about 25.2% in patients with chronic asthma and is associated with increased hospital, emergency department, and overall cost of care. Identifying the extent of this barrier to asthma medication adherence is critical at any institution.

Objective:

The purpose of this study is to compare time until next hospital admission in pediatric asthmatics who did and did not pick up their inhalers after hospital discharge.

Methods:

This study is exempt from Institutional Review Board (IRB) review. This will be a retrospective analysis of pediatric patients age 18 or younger admitted at least twice to Upstate University Hospital for asthma exacerbation during August 1, 2014 to January 1, 2019. Patients will be identified via a query of the electronic medical record and will be excluded if they were not discharged with a new inhaler (rescue or controller) prescription. All data will be collected using a standardized data collection form and this will include: demographics, intensive care unit admission, medication related data such as name, dose and frequency and days between hospital admissions. The primary investigator will contact the pharmacy where the prescriptions were sent at the initial discharge to determine if the medications were picked up. All data will be presented using descriptive statistics. Statistical test analysis will be two-tailed, and a p-value < 0.05 will be considered statistically significant.

Results and Conclusion: In progress

THERE'S A "CLOT" TO DISCOVER: DOAC USE IN OBESE AND UNDERWEIGHT PATIENTS

Willner D*, Chin J, Hindenburg A, Akerman M

NYU Winthrop Hospital, 259 1st St, Mineola, NY 11501

Background:

The Direct Oral Anticoagulants (DOACs) have become the preferred anticoagulant treatment modality due to oral route of administration, limited monitoring, and fixed dosing. The labeling of DOACs don't provide recommendations for adjustments in obese or underweight patients, generally defined as <50-60kg and >100kg. The Scientific and Standardization Committee of the International Society on Thrombosis and Haemostasis (ISTH) released guidance for the use of DOACs in obese patients. In patients who have a BMI >40 or weigh >120kg, due to limited data with regard to efficacy as well as PK/PD, DOACs should not be used, and warfarin is the preferred agent. Further guidelines also recommend avoiding DOACs in patients with extremes of weight- <50kg and <120kg. Although these recommendations are available, we still see the use of DOACs in patients with a BMI above 40 or with weights above 120kg. It is therefore essential that we analyze the use of DOACs in these patients in order to observe for any efficacy or safety changes in this patient population.

Objective:

Analyze the efficacy and safety of DOACs in obese and underweight patients as compared to patients treated with warfarin.

Methods:

This is a retrospective, single-centered evaluation of patients taking a DOAC or warfarin between October 2016 to October 2018 with BMI ≥ 40 or weight ≤ 45 kg. The following data has been collected: age, gender, renal profile, weight, BMI, DOAC treatment indication, duration of anticoagulation administration, readmission due to recurrent thromboembolism, and readmission due to bleeding.

Results: Pending

Conclusions: Pending

THE ABC'S OF SURVIVING SEPTIC SHOCK: SOFA SO GOOD

Zada I*, Wang S, Akerman M, Hanna A

NYU Winthrop Hospital, 259 1st Street, Mineola, NY 11501

Background: Recent studies have suggested that treating patients in septic shock with intravenous vitamin C, hydrocortisone, and thiamine was effective in preventing progressive organ dysfunction and reducing the mortality of patients with septic shock. However, given the small patient population that was evaluated and the high cost associated with this regimen, many practitioners are hesitant to extrapolate the findings of the studies to their patients in the critical care unit. As such, a retrospective analysis was done to determine the potential benefit of this regimen in patients diagnosed with septic shock.

Objectives: To determine whether the use of hydrocortisone, vitamin C, and thiamine reduce the degree of organ dysfunction and mortality in patients with septic shock

Methods: Patient charts were reviewed and the following information was collected: patient age, gender, ethnicity, and provider notes. The duration of mechanical ventilation was noted, in addition to the use of vasopressors and their doses, the trend in the patient's renal function, lactate levels, mean arterial pressure (MAP), Carrico index, and daily SOFA scores.

Results:

Variable	Percent Change
SOFA score	25% reduction
Mean Arterial Pressure (MAP)	38% increase
Lactate	39% reduction
Serum creatinine	11% reduction
Procalcitonin	57% reduction

Predicted mortality: 58%

Actual mortality: 33%

Conclusion: Based on the results thus far, the use of the agents listed reduced the degree of organ dysfunction and likelihood of mortality; based on these findings, the above regimen should be considered in septic shock.