Poster #1

PRIMARY AUTHOR'S NAME

Nicholas C. Hodge, PharmD

PRACTICE LOCATION

Ascension Saint Thomas Rutherford Hospital

ADDITIONAL AUTHORS

Amber Shadoan, MD
Ben Turner, PharmD, BCPS
Dudley Glass, MD
Jonathan Hughes, PharmD, BCPS, BCACP

TITLE OF POSTER

Effect of an interdisciplinary approach in a family medicine residency program (FMRP)-affiliated/patient-centered medical home (PCMH) to improve screening and treatment of hepatitis C

ABSTRACT

Direct-acting antivirals (DAA) have improved treatment outcomes in hepatitis C (HCV) through their general tolerability and superior efficacy, with cure rates above 90 percent. Additionally, the simplicity of many regimens makes them ideal for management in the outpatient setting. However, lack of familiarity and perceptions of complexity with the disease state, along with the high costs of therapy, create barriers to screening and treatment. The purpose of this study is to assess the effect of an interdisciplinary initiative in an FMRP-affiliated PCMH on improving HCV screening and treatment.

This study is being submitted to the Institutional Review Board as a quality improvement project. Eligible patients 18 years and older presenting to Saint Louise Clinic will be screened and treated for HCV per AASLD guidelines and manufacturer recommendations. Patients with decompensated cirrhosis, transplant candidates, or co-infections will be excluded and directed to a specialist. Physicians and medical residents received a 3-hour, case-based didactic workshop led by a physician and an Ambulatory Care clinical pharmacist specialist. Physicians will also receive pocket cards referencing screening, diagnosis, treatment options, and safety information. During the implementation phase, newly-educated clinicians and their patients will share their visit with an identified HCV Champion. Text macros for standardized notation and order sets were created within the electronic medication record to prompt efficient and thorough evaluation. Population health reports will be utilized to identify patients needing treatment for referral to a collaborative appointment between the pharmacist and their PCP. The primary outcome will be the number of patients achieving SVR 12. Secondary outcomes include percentage of eligible patients born between 1945-1965 screened pre/post educational intervention and percentage of patients evaluated and deemed candidates for DAA therapy who achieve sustained virologic response (SVR12).

Since March, the Saint Louise Clinic has assessed 15 patients for treatment of HCV. Baseline demographics include a mean age of approximately 45 years, 67 percent white, 60 percent with genotype 1, and 73 percent with a risk factor of intravenous drug abuse. Treatment was initiated in nine patients, with seven completing therapy; we currently have one confirmed SVR12.

To date, the interdisciplinary approach utilized at our clinic has demonstrated initial success.

Poster #2

PRIMARY AUTHOR'S NAME

Maren E. Richards-Brinton, PharmD

PRACTICE LOCATION

Ascension Saint Thomas Rutherford Hospital

ADDITIONAL AUTHORS

Anisha Patel, PharmD
Julie Hudgens, PharmD, MBA, BCPS
Brandy Greene, PharmD

TITLE OF POSTER

Evaluation of alvimopan use after major small or large bowel procedures

ABSTRACT

Alvimopan is a peripherally-acting mu-opioid receptor antagonist traditionally used to prevent postoperative ileus (POI) after major abdominal surgery. Despite its decreased use in recent years, alvimopan remains one of the highest drug expenditures within the Ascension Saint Thomas health-system. Given the current emphasis placed on responsible medication utilization, there is an opportunity to further review the role alvimopan plays in the prevention of POI. The purpose of this medication-use evaluation (MUE) was to determine what outcome differences exist between patients who received alvimopan after major small and large bowel procedures and those who did not.

This MUE was conducted through retrospective chart review of patients from three hospitals in the Ascension Saint Thomas health-system who had undergone a major small or large bowel procedure. A total of 344 patients were identified as having received alvimopan in a 12-month period from July 1, 2018 to June 30, 2019. Ultimately, 50 patients were reviewed, divided evenly in groups of 25 patients between the two facilities who utilize alvimopan. Patient information and laboratory data were collected from Cerner®. Information collected included, but was not limited to, type of surgery performed, time to first bowel movement, number of alvimopan doses administered, and total pharmacy charges related to alvimopan use. These patients were then compared to 75 patients who did not receive alvimopan to determine if outcomes amongst the groups differed.

Patients who received alvimopan during their admission had an ~50% shorter length of stay. Before normalizing patient costs for length of stay, patients who received alvimopan had fewer pharmacy charges than those who did not. After normalization for length of stay, there was very little difference between the two groups at each of the facilities. No patients who received alvimopan experienced post-operative ileus compared to ~11% of patients who did not receive the drug.

Patients who are given alvimopan prior to and after their major large or small bowel procedure have shorter length of stays, but increased pharmacy charges per day compared to those who do not receive the drug. Rate of ileus remains highly variable among patients who do not receive alvimopan.

Poster #3

PRIMARY AUTHOR'S NAME

Christopher S. Wren, PharmD

PRACTICE LOCATION

Ascension Saint Thomas Rutherford Hospital

ADDITIONAL AUTHORS

Sara Knoll, PharmD
Katherine Teare, PharmD, BCCCP
Noah Ploegman, PharmD, BCCCP

TITLE OF POSTER

Impact of pharmacist medication review versus auto-verification in the emergency department

ABSTRACT

Purpose: The emergency department setting presents a number of challenges in preventing adverse medication events. Due to the often acute nature of patient's needs in this setting, timely administration is of great importance. To that end, the pharmacy department at Saint Thomas Rutherford hospital implemented auto-verification of medication orders in our emergency department setting. Due to concern for significant errors possibly leading to adverse outcomes, auto-verification was disabled in Sept 2017. The purpose of this study is to evaluate the rate of appropriate medication orders prospectively reviewed by a pharmacist versus medication orders auto-verified by the electronic medical system.

Methods: This study is a single-center retrospective study of auto-verified versus prospectively reviewed orders identified via generated reports of all auto-verified (May 2017 - Aug 2017) and pharmacist-reviewed (Nov 2017 - Feb 2018) medication orders within select, high-risk, categories. From these reports, orders were randomly selected for inclusion. The primary outcome is defined as the rate of appropriate medication orders in the auto-verification versus pharmacist review groups. Order appropriateness is determined by examining individual characteristics of each order compared with patient data that would have been available at the time of verification. Secondary outcomes include comparison of time to administration between the auto-verification and pharmacist review groups, rates of appropriate renal and hepatic adjustment of medications, and rates of order re-entry and pharmacist intervention prior to administration in the auto-verification group. Outcomes were evaluated with either the t-test or Chi-squared.

Results: Preliminary data has been collected from 51 orders in the auto-verify (AV) group and 50 orders in the prospective review (PR) group. The primary outcome occurred in 45 (88.2 percent) of AV orders and 45 (90 percent) of PR orders (percent difference 1.8, P 0.7759). Regarding secondary outcomes, mean time to administration of medication was 40.8 minutes [standard deviation (SD) 44.4] in the AV group versus 45.7 minutes [SD 57.5] in the PR group [Difference 4.89, P 0.3262]. Orders were re-entered in 0 (0 percent) AV orders and 13 (26.0 percent) PR orders [percent difference 26.0, $P < 0.0001$]. Lastly, orders that received intervention prior to administration occurred in 1 (2.0 percent) in the AV group versus 8 (16.0 percent) in the PR group [percent difference 14.0, P 0.0132].

Conclusion: To date, there has been no difference shown in the primary outcome. Though there is a trend towards a greater rate of appropriate orders with prospective review, it has not been shown to be statistically significant. Further, prospective review of medication orders in the emergency department does not result in significant delays in therapy, demonstrated by a lack of significant difference in time from order entry until administration.

PRIMARY AUTHOR'S NAME

Taylor E. Gish, PharmD

PRACTICE LOCATION

Ascension Saint Thomas West Hospital

ADDITIONAL AUTHORS

Jarett Worden, PharmD, BCPS
Chris Larkin, PharmD

TITLE OF POSTER

Nafcillin versus cefazolin for the treatment of methicillin-susceptible Staphylococcus aureus bacteremia

ABSTRACT

Purpose: The purpose of this study is to compare treatment outcomes between patients receiving cefazolin and nafcillin for the treatment of methicillin-susceptible Staphylococcus aureus (MSSA) bacteremia.

Methods: This study was a single-center, retrospective chart review of adult patients treated for MSSA bacteremia with either cefazolin or nafcillin therapy from January 1, 2017 to December 31, 2018. This study included 50 patients in the nafcillin treatment group and 15 patients in the cefazolin treatment group. Data was analyzed to assess differences in treatment failure for patients receiving cefazolin or nafcillin for the treatment of MSSA bacteremia. Secondary outcomes included comparing length of stay, time to clearance of blood cultures, and rates of adverse drug reactions between the two groups.

Results: The nafcillin group experienced 23 treatment failures and the cefazolin group experienced three treatment failures (46 percent vs 20 percent; p=.082). The secondary outcomes were similar between both groups except for time to clearance of cultures and hypokalemia. The nafcillin group resulted in a median time [IQR] to clearance of cultures of four days [2 - 5.3] compared to three days [2 - 3] for the cefazolin group (p= 0.025). In the nafcillin group, 18 patients (36 percent) experienced hypokalemia, whereas no patients in the cefazolin group experienced hypokalemia (p=0.007).

Conclusion: There was no difference in overall treatment failure rate among patients who received nafcillin or cefazolin. There were significantly more patients who developed hypokalemia with nafcillin than cefazolin, and the time to clearance of cultures with cefazolin was significantly shorter. These results support a re-evaluation of cefazolin’s role in treating MSSA bacteremia.

Poster #5

PRIMARY AUTHOR'S NAME

Catherine A Nguyen, PharmD

PRACTICE LOCATION

Ascension Saint Thomas West Hospital

ADDITIONAL AUTHORS

Jeannie Watson, PharmD, BCPS
Adam Wiss, PharmD
Robin Tagatz, BS Pharm, PharmD, MSIHCM

TITLE OF POSTER

Methylene blue for the treatment of vasoplegia

ABSTRACT

Purpose: The purpose of this study is to determine if the administration of methylene blue (MB) improves survival in patients who undergo cardiopulmonary bypass (CPB) and experience vasoplegia.

Methods: This study is a retrospective chart review of patients who experienced vasoplegia during their stay at Saint Thomas West Hospital from November 2017 to November 2019. Patients with vasoplegia are defined as those who received MB (MB group) or those who were administered at least two vasopressors with at least two of the following hemodynamic parameters (No MB group): mean arterial pressure less than 50 mmHg, cardiac index greater than 2.5 L/min/m2, systemic vascular resistance less than 800 dyne·sec/cm5, or norepinephrine dose greater than or equal to 0.5 mcg/kg/min.

Results: Six out of sixteen patients in the MB group and one out of fourteen patients in the No MB group experienced mortality. Total duration of time on vasopressors was 136.8 hours and 40.2 hours in the MB and No MB group, respectively. For patients that did not experience mortality, hospital length of stay was 36.2 days and 13.8 days, and intensive care unit length of stay was 26.9 days and 6.6 days in the MB and No MB group, respectively.

Conclusion: The use of MB did not have a statistically significant difference in mortality. It did not significantly affect time until improvement of hemodynamic measures. Patients who received MB had a significantly longer hospital length of stay. Of note, patients in the MB group were more hemodynamically unstable at baseline despite being matched using standard screening criteria for vasoplegia.

PRIMARY AUTHOR'S NAME

Kevin T. Phan, PharmD

PRACTICE LOCATION

Ascension Saint Thomas West Hospital

ADDITIONAL AUTHORS

Kwame Asare, PharmD
Caroline Barone Gatzke, PharmD

TITLE OF POSTER

Comparison of post-transplant hospital readmission rates in obese vs. non-obese kidney transplant recipients

ABSTRACT

Purpose: The prevalence of obesity in the United States continues to grow over the years. Obesity is defined as a body mass index (BMI) greater than or equal to 30. Recent surveys have suggested a prevalence of 39.6 percent among American adults, up from 30.5 percent in 1999-2000. Similarly, there has been a 116 percent increase in the number of obese kidney transplant recipients.

Previous studies have suggested an association between obesity and an increased risk of delayed graft function and wound complications such as infection or dehiscence in patients receiving kidney transplantation. Others have suggested that obese patients should still be considered for transplant because they had excellent 3-year survival post-transplantation compared to alternative treatments such as dialysis. There are also studies showing successful grafts in obese patients (with a BMI up to 40) receiving living donor kidneys with comparable graft and patient survival to non-obese transplant recipients. Thus, there appears to be a lack of consensus on the association between obesity and postoperative complications in patients receiving a kidney transplant.

The aim of this study is to compare post-transplant hospital readmission rates within the first year in obese versus non-obese kidney transplant recipients. The secondary objectives are incidence of delayed graft function and hospital stay within the first year.

Methods: This is a retrospective chart review of kidney transplant recipients at Ascension Saint Thomas West Hospital (a 541-bed tertiary care facility in Nashville, TN) utilizing electronic medical records. Up to 120 patients who received kidney transplant recipients between 12/01/16 and 12/01/18 will be enrolled and followed through 12/01/19. The study includes adult patients who were a kidney transplant recipient at Ascension Saint Thomas West. The study excludes patients with a kidney transplant performed in combination with any other organ during the study period. A subgroup analysis on the four obesity groups (normal, overweight, obese, and morbidly obese) will also be performed.

Results: Pending

Conclusion: Pending

Poster #7

PRIMARY AUTHOR'S NAME

Kayla R. Scheps, PharmD

PRACTICE LOCATION

Ascension Saint Thomas West Hospital

ADDITIONAL AUTHORS

Brooke Tullos, PharmD
Adam Wiss, PharmD

TITLE OF POSTER

Impact of a viral respiratory panel (VRP) on the duration of antibiotic therapy in influenza positive patients

ABSTRACT

Purpose: Influenza is a common viral respiratory infection that leads to numerous hospitalizations worldwide. Symptoms of influenza can be mistaken with bacterial infections which can lead to the unnecessary initiation of antibiotic therapy. With improvements in technology, faster alternatives can help aid in the diagnosis of influenza to discontinue unwarranted antibiotic therapy. The purpose of this study is to determine if the utilization of a viral respiratory panel (VRP) compared to a rapid influenza diagnostic test (RIDT) decreased the duration of antibiotics in patients who tested positive for the influenza virus.

Methods: This study is an IRB-approved, retrospective chart review of patients 18 years of age and older admitted to Saint Thomas West Hospital who tested positive for influenza using a VRP during the time frame of October 1, 2018 to May 31, 2019 or a RIDT during the time frame of October 1, 2016 to May 31, 2017. Patients were excluded if they had a positive influenza screening without antibiotic use, a respiratory co-infection with antibiotic use, or invalid VRP and RIDT results. The primary objective is to determine if the implementation of a VRP compared to a RIDT decreased the duration of antibiotics in patients who tested positive for the influenza virus. Secondary objectives include the length of stay and turnaround time of test results.

Results: Sixteen patients were included in the study. Over half of the patients in the study had a co-infection. The median length of antibiotic therapy was 0.9 days [IQR, 0.4-1.9] and 1.6 days [IQR, 1.1-2.9] for the VRP group and RIDT group (p=0.280), respectively. The RIDT had a shorter turnaround time of results in 0.7 hours [IQR, 0.5-0.7] compared to 3 days [IQR, 2.1-5] in the VRP group (p=0.001).

Conclusion: A VRP compared to a RIDT did not decrease the duration of antibiotic therapy in patients who tested positive for the influenza virus.

Poster #8

PRIMARY AUTHOR'S NAME

Braydon A.W. Smith, PharmD

PRACTICE LOCATION

Ascension Saint Thomas West Hospital

ADDITIONAL AUTHORS

Matt Bibb, PharmD, BCGP
Michelle Wilcox, PharmD

TITLE OF POSTER

Bupivacaine-containing elastomeric device to decrease post-procedure opioid use

ABSTRACT

Purpose: Elastomeric pumps are devices that continually infuse medication without the need for electricity or gravity. Surgeons like the practicality of a device that delivers medicine locally as it prevents central nervous system toxicities associated with systemic administration. This study will assess if these pumps decrease post-surgery opioid usage. Discouraging opioid addiction and bypassing systemic toxicities associated with this class of medicine is the basis of this research.

Methods: This study will be collected through retrospective manual review of patient charts utilizing REDCap to de-identify patient information. This study is a single-site study at Ascension Saint Thomas West Hospital in Nashville, TN and will include up to 200 patients. Patients who are equal to or greater than 18 years of age who have undergone a video-assisted thoracoscopy surgery are included. Patients who have a history of chronic use of scheduled opioids will be excluded from the study. The primary outcome, morphine milliequivalents usage, will be analyzed after obtaining all opioid-derived medications that were used after the surgery and up to time of discharge. Secondary outcomes will assess if there is a difference between groups in areas pertaining to total hospital length of stay, opioid usage in the first 72 hours post-op, and the use of non-opioid analgesia medications including ketorolac, acetaminophen, propofol, and gabapentin.

Results: Pending

Conclusion: Pending

Poster #9

PRIMARY AUTHOR'S NAME

Yulonda D. Warren, PharmD

PRACTICE LOCATION

Ascension Saint Thomas West Hospital

ADDITIONAL AUTHORS

Tonya Thomas, PharmD
Kelley Baxter, PharmD

TITLE OF POSTER

Impact of Deprescribing proton pump inhibitors (PPIs) and the recurrence of gastroesophageal reflux disease (GERD) symptoms

ABSTRACT

Purpose: Evidence-based clinical practice guidelines have been developed that focus on deprescribing proton pump inhibitors (PPIs) because of their often chronic use without an ongoing indication, which could lead to serious adverse effects and economic implications. The purpose of this study is to successfully deprescribe PPIs and evaluate the impact on the recurrence of GERD symptoms.

Methods: Single center, prospective cohort study of patients admitted to Ascension Saint Thomas West Hospital October 21, 2019 – February 1, 2020. Eligible patients are those ≥ 18 with a history of GERD who have been taking a PPI for a minimum of 8 weeks prior to admission and had it continued during hospital stay. Consenting patients will receive education on possible adverse effects of PPIs and appropriate duration of treatment. They were also educated on other non-pharmacologic and over the counter options for symptom management. Patients agreeing to deprescribe received 30 and 60-day follow-up phone calls or emails.

Results: Three patients consented to study and were provided PPI education. Of those three, two patients agreed to deprescribe. At the 30-day follow-up, one patient used alternative therapy then resumed their PPI. Additional results are pending.

Conclusions: Pending

Poster #10

PRIMARY AUTHOR'S NAME

Jessica Sherrod, PharmD

PRACTICE LOCATION

Blount Memorial Hospital

ADDITIONAL AUTHORS

Stephanie Grimes
Brad Crane
Danielle yates
Nikki Sowards

TITLE OF POSTER

Retrospective review of discharge antibiotic appropriateness for the treatment of pneumonia to determine if readmission rates are affected

ABSTRACT

Purpose: 30 day readmission rates for Medicare patients have a direct effect on our institutions reimbursement rates. Blount Memorial Hospital (BMH) has identified patients with the diagnosis of pneumonia as having a higher than desired readmission rate. There is currently little data available to determine the cause of readmission post a primary diagnosis of pneumonia (HCAP and CAP) diagnosis. The purpose of this study is to evaluate the appropriateness of the treatment of pneumonia at BMH to determine if there is a correlation between the way pneumonia is treated and 30 day readmissions.

Methods: A retrospective chart review of patients admitted at BMH with a primary diagnosis at discharge of pneumonia or a primary diagnosis at discharge of sepsis with a secondary diagnosis of pneumonia or aspiration pneumonia coded as present on admission, and no secondary diagnosis of severe sepsis or septic shock coded as present on admission between May 1, 2019-June 30, 2019. The data to be collected is age, sex, relevant comorbid conditions, antibiotics ordered, attending physicians, discharge destination, and readmitting diagnosis.

The primary endpoint of this IRB-approved, retrospective cohort analysis is to evaluate the correlation between appropriate and suboptimal treatment of pneumonia and 30 day readmission rates.

Results: Pending

Conclusion: Pending

Poster #11

PRIMARY AUTHOR'S NAME

Mariah Steele, PharmD

PRACTICE LOCATION

Blount Memorial Hospital

ADDITIONAL AUTHORS

Patrick Blankenship
Emily Duncan
Amy Porter

TITLE OF POSTER

Emergency Medicine pharmacy services Gap Analysis

ABSTRACT

Purpose: The primary objective of this study is to perform a gap analysis comparing current pharmacy practices in the emergency department at Blount Memorial Hospital to guidelines published by American Society of Health System Pharmacists. The analysis will be used to assess areas for improvement in pharmacy practice in the emergency department. Secondary objectives include identifying existing barriers to performing the guideline specific roles and making quality improvement recommendations.

Methods: This study will be submitted to the Institutional Review Board for approval. A gap analysis will be performed to compare current emergency medicine pharmacist services to guideline recommended services. An intervention documentation form will be developed based on the published guidelines. Emergency medicine pharmacists will be educated on utilizing this form to record interventions. Data from emergency medicine pharmacist interventions will be collected for a 6 week period (October-November 2019). A review of the gap analysis and data from the intervention documentation forms will be performed to determine areas for improvement in pharmacy services. Results will be shared with emergency medicine pharmacists. In addition, data will be used to identify barriers in performing the guideline specific roles.

Results: Pending

Conclusion: Pending

Poster #12

PRIMARY AUTHOR'S NAME

Caitlyn Whitaker, PharmD

PRACTICE LOCATION

Blount Memorial Hospital

ADDITIONAL AUTHORS

Brad Crane
Susan Roberts
Madison Iman

TITLE OF POSTER

Outcomes associated with changing from MicroScan to MALDI-TOF/Phoenix technology in a mid-size community hospital

ABSTRACT

Purpose: Matrix Assisted Laser Desorption Ionization Time of Flight (MALDI-TOF) together with BD Phoenix technology provides rapid organism identification and susceptibility results. This IRB-approved, retrospective chart review aims to determine the impact of change in microorganism identification and susceptibility technology from MicroScan to MALDI-TOF/Phoenix on various aspects of infection treatment in a community hospital.

Methods: Patients will be identified from reports of positive wound, urine and sputum cultures generated through Sunquest for both MicroScan and MALDI-TOF/Phoenix technologies. Information to be collected from the patients' charts includes: the time at which organism species was identified, the time organism susceptibilities result, the time empiric antibiotic therapy was started, the time the organism was covered, and the time until optimal antibiotic therapy was initiated. Additionally, information related to hospital/ICU length of stay and pharmacist interventions will be collected. The difference in time to organism identification and susceptibility results between systems will be analyzed and the impact of this change in our institution will be assessed.

Wound, urine and sputum specimens taken from patients who received antimicrobial therapy in the hospital during the months of July and October 2019 will be included. Cultures will be excluded if they are missing data, are duplicate requests, positive only for yeast, or result with a final description of "likely contaminant." Data will also be excluded for patients who were discharged before the culture returned positive, patients on long-term antimicrobial therapy for complex infections, patients who did not receive therapy for their culture due to contamination/colonization, patients who left against medical advice (AMA), and patients who expired or were placed on comfort care within the 1st 48 hours after the culture turned positive.

The primary endpoint of the investigation is to determine the time difference to the optimal antimicrobial therapy between systems. Secondary endpoints include time to initial organism coverage, impact on hospital expenditure, patient length of stay, and mortality.

Results: Pending

Conclusion: Pending

Poster #13

PRIMARY AUTHOR'S NAME

Kameron Blair, PharmD

PRACTICE LOCATION

Catholic Health Initiatives Memorial Hospital

ADDITIONAL AUTHORS

Linda Johnson, PharmD, BCPS, BCIDP

TITLE OF POSTER

Evaluation of the appropriateness of procalcitonin utilization at a community hospital

ABSTRACT

Procalcitonin is a routinely ordered lab for many patients with a suspected infection at CHI Memorial. The most available data for the clinical use of procalcitonin exists in the management of sepsis and respiratory tract infections. Our institution has employed protocols to guide antibiotic management decisions based upon the resulting procalcitonin levels. This study aimed to evaluate the appropriateness of procalcitonin lab orders and subsequent antibiotic management at CHI Memorial. This observational, retrospective utilization review assessed inpatients from April 1-April 30, 2019. The percentage of procalcitonin levels ordered for appropriate indications, percentage of appropriate response to the levels, patient comorbidities and duration of therapy were evaluated. Data was collected on 50 patients, and a total of 85 procalcitonin levels were evaluated. Of the 85 levels collected, 57 (67.1%) were deemed appropriate. Approximately 43 (75%) of the appropriate levels were acted upon per hospital protocol. Of all initial PCT levels, 31 were normal and 17 (55%) of normal levels were ordered for appropriate indications. Despite normal procalcitonin levels, 18 (58%) patients were initiated on antibiotics. In patients with abnormal initial procalcitonin levels (n=19), 14 (74%) were ordered for appropriate indications. Of these 14 patients, 7 had comorbidities that could elevate procalcitonin, including chronic kidney disease, cardiac shock, and lung cancer. All patients with an abnormal procalcitonin ordered for an appropriate indication with no comorbidities were initiated on antibiotics. An evaluation of subsequent procalcitonin levels demonstrated that patients were continued on antibiotic therapy for a median of 1 day post level normalization. From the results of this study, we can conclude that procalcitonin levels are ordered and utilized inappropriately at CHI Memorial. Additional education and prospective audit and feedback needs to be provided to improve the use of this tool.

Poster #14

PRIMARY AUTHOR'S NAME

Matthew A, Green, PharmD

PRACTICE LOCATION

Catholic Health Initiatives Memorial Hospital

ADDITIONAL AUTHORS

Quinn, Amy PharmD

TITLE OF POSTER

Assessment of nutritional status after amino acid/glycerin with electrolyte peripheral infusion for at least 24 hours in a community hospital

ABSTRACT

Purpose: An important aspect of care in the hospital is to ensure appropriate nutritional therapy. A growing body of evidence shows patients with malnutrition have negative outcomes during their hospital stay. These outcomes include events such as infection, impaired wound healing, longer length of stay, and increased morbidity and mortality. 1-4 This project was designed to assess whether nutritional needs are met with a standard amino acid/glycerin with electrolyte peripheral infusion.

Methods: This is a single center, retrospective study to evaluate whether nutritional needs are adequately met with an amino acid/glycerin with electrolyte solution when enteral intake was not obtainable. Men and women aged 18 or greater treated with intravenous amino acid/glycerin with electrolyte for at least 24 hours were included. Patients aged less than 18 or pregnant were excluded. One hundred and fifty-eight patients from June 1, 2018 to May 31, 2019 were evaluated. Key data points collected were: age, sex, weight, body mass index on admission and discharge, time from admission to initiation of nutrition, appropriateness of route, basal metabolic needs as defined by Mifflin St. Jeor (MSJ) equation, kilocalories per day and grams of protein per day as provided by peripheral amino acid/glycerin with electrolyte infusion, and electrolyte changes. The primary outcome was to determine if the patient's basal metabolic needs were met with utilization of peripheral amino acid/glycerin with electrolyte infusion.

Results: Pending

Conclusion: Pending

Poster #15

PRIMARY AUTHOR'S NAME

Casey E. O'Neal, PharmD

PRACTICE LOCATION

Catholic Health Initiatives Memorial Hospital

ADDITIONAL AUTHORS

Rachel Kile, PharmD, BCPS

TITLE OF POSTER

Evaluation of the appropriateness of sugammadex use for neuromuscular blockade reversal in accordance with pharmacy and therapeutics committee restriction criteria

ABSTRACT

Purpose: The acetylcholinesterase inhibitor, neostigmine, in addition to the anticholinergic agent, glycopyrrolate, have been the mainstays of non-depolarizing neuromuscular blockade (NMB) reversal until sugammadex was approved in 2015. Sugammadex was added to formulary at CHI Memorial with restriction criteria for use in 2016. Over the last 12 months, our institution has seen a vast increase in sugammadex use. Therefore, this study was designed to evaluate appropriateness of sugammadex utilization for reversal of NMB at CHI Memorial in accordance with established hospital use restriction criteria, in addition to identification of new clinically appropriate restriction criteria.

Methods: This retrospective utilization review evaluated sugammadex use post-extubation in patients who underwent a surgical procedure at the Glenwood campus of CHI Memorial hospital in Chattanooga, TN between May 2019 and July 2019. Patients were identified from a list created in our surgery pharmacy based on distribution of sugammadex to certified registered nurses of anesthesia (CRNAs) and reports of sugammadex removal from automated dispensing cabinets. Patients who were ≥ 18 years of age, underwent a surgical procedure, received a non-depolarizing NMB, and received at least one dose of sugammadex were included. There were no exclusion criteria. Data was collected through manual chart review and the electronic medical record system. The primary outcome measures included rate of adherence to established hospital restriction criteria for sugammadex use, and to classify and determine the incidence of use that did not align with approved criteria. Secondary outcome measures included the incidence of adverse events from sugammadex and neostigmine, rates of reintubation, average hospital length of stay, and cost of sugammadex use.

Results: Pending

Conclusion: Pending

Poster #16

PRIMARY AUTHOR'S NAME

Bradley A Proctor, PharmD

PRACTICE LOCATION

Catholic Health Initiatives Memorial Hospital

ADDITIONAL AUTHORS

Daniel Marsh, PharmD, BCPS
Rachel Kile, PharmD, BCPS

TITLE OF POSTER

Evaluation of opioid prescribing patterns and an alternative to opioids (ALTO) approach to analgesia within the emergency department

ABSTRACT

Purpose: Opioid abuse and overdose is continuing to increase at an alarming rate. In order to have an impact on opioid prescribing and exposure, hospitals and providers across the nation are implementing alternative to opioid (ALTO) treatment pathways for specific types of pain. This study was conducted to evaluate opioid prescribing patterns 12 months after implementing alternative to opioid (ALTO) treatment pathways within the emergency department and identify missed opportunities for use.

Methods: This retrospective chart review examined patients treated with an opioid or an alternative to opioid (ALTO) medication within the emergency department of a 369-bed acute care community hospital on selected dates during May 2019. Patients who were 18 years or older and treated with at least one opioid medication or an alternative to an opioid medication (low dose lidocaine or ketamine) within the emergency department were included in the study. Patients treated for an acute pain crisis due to a chronic pain condition were excluded. Data was obtained using reporting tools from automated dispensing cabinets and electronic medical record software as well as manual chart review. Data points collected included opioid prescribed, dose of opioid, alternative medication to opioid prescribed, timing of medication administration, diagnosis, established ALTO prescribing pathway, and use of an ALTO pathway (yes or no). The percentage of patients treated with an opioid prior to an alternative medication for pain within an established pathway was calculated to determine missed opportunities.

Results: Pending

Conclusion: Pending

Poster #17

PRIMARY AUTHOR'S NAME

Alexis E. Schrieber, PharmD

PRACTICE LOCATION

Community Health Systems

ADDITIONAL AUTHORS

Dawn Y. Scott, PharmD

TITLE OF POSTER

Implementation of NHSN antibiotic use reporting in community hospitals

ABSTRACT

Reporting to the National Healthcare Safety Network (NHSN) allows for national trending of use of antibiotics. In the state of Tennessee, antibiotic use reporting will become mandatory for larger sized acute care hospitals (>250 beds) on January 1, 2021. Acute care hospitals in Tennessee with a bed size of 100-250 will begin mandatory reporting in 2022. In 2023, all remaining acute care hospitals will be required to submit antibiotic use data in Tennessee. This descriptive report details how antibiotic use reporting was rolled out across a health system using a clinical decision support tool. The methodology for rollout of antibiotic use reporting contained three parts: obtaining a medication administration feed with the clinical decision support tool, education on submitting a reporting plan and the data, and monitoring on antibiotic use submission. The medication administration feed was implemented for 24 hospitals in 2016. As of August 2019, no hospital sites had utilized this functionality to report antibiotic use data. In fall of 2019, the health system undertook an educational campaign focused on pharmacists to promote antibiotic use reporting. This educational campaign resulted in two hospital sites reporting antibiotic use data in the first month following the educational campaign and twenty hospitals submitting data by the end of 2019. Continuous monitoring and follow-up was used to ensure that sites submitted data monthly. This report concludes that education and follow-up are key mechanisms in ensuring hospitals report antibiotic use data to the National Healthcare Safety Network.

Conflict of Interest: Alexis Schrieber, the primary author, is currently completing a fellowship at Wolters Kluwer Health, a medical content and software company. Sentri7®, a Wolters Kluwer product, is utilized by the health system to submit antimicrobial use data.

Poster #18

PRIMARY AUTHOR'S NAME

Jonathan A. Clark, PharmD

PRACTICE LOCATION

Cookeville Regional Medical Center

ADDITIONAL AUTHORS

Jonathan Clark
Quyen Nguyen
Andrew Beaty
Marnie Rogers

TITLE OF POSTER

Pharmacist guided antimicrobial stewardship for UTIs in the emergency department

ABSTRACT

This scope of this project is to determine the benefits of a pharmacist lead antimicrobial stewardship initiative for bacteriuria in the emergency department of Cookeville Regional Medical Center, a community-based hospital in Middle Tennessee. This project will address an area of opportunity pertaining to appropriate antibiotic selection, prescribing, and follow up for patients discharged from the emergency department. The results of this study will assess the success of implementing a standard protocol for the treatment of urinary tract infections and to develop a collaborative practice agreement within the emergency department. The primary outcome of this study is to assess antimicrobial usage in the emergency department for treatment of urinary tract infections. Secondary outcomes will be the quantity of urinalysis ordered, urine cultures ordered, and the appropriateness of antimicrobial selection over a three month period post protocol implementation. Retrospective data will be collected prior to implementation to determine the baseline pattern of antibiotic prescribing. A stewardship algorithm will be created and provided to help guide appropriate provider ordering of urinalysis, urine cultures and antimicrobials. This algorithm will be based on published guidelines and the most updated antibiogram for the practice site. Providers will be educated by a pharmacist regarding the algorithm and protocols and how antibiotic regimens were chosen. The providers will use this tool while assessing their patients over a 3 month period. Prospective data will be collected after implementation of the algorithm and protocols to assess changes of primary and secondary outcomes.

Poster #19

PRIMARY AUTHOR'S NAME

Sheldon C. Hitchcock, PharmD

PRACTICE LOCATION

Cookeville Regional Medical Center

ADDITIONAL AUTHORS

TITLE OF POSTER

Pharmacist managed discharge medication reconciliation: Impact on patient care and discharge process when completed prior to day of discharge

ABSTRACT

Purpose: Accurate medication reconciliation at hospital discharge is a crucial component for ensuring a successful transition of care. Pharmacists are best poised to complete this task and ensure patients are being discharged with the correct medication regimen. However, current discharge workflows have the provider completing this task on the day of discharge often times leading to a lower quality medication reconciliation and a less efficient discharge process due to the need for multiple order clarifications. The purpose of this project is to demonstrate the pharmacist's ability to provide a complete medication reconciliation that simplifies and improves the overall discharge process.

Methods: Current process has the provider completing the discharge medication reconciliation on the day the patient is being discharged. Prior to immediate discharge a pharmacist reviews the newly created medication list to ensure appropriateness, contacts the provider to correct any errors, and provides counseling to the patient regarding the changes. Pharmacist managed discharge medication reconciliation will be piloted on one medical unit of the hospital and the following changes will be implemented. First, multidisciplinary rounds which have traditionally occurred in the morning will be moved to the afternoon to allow more time to evaluate patients, thus allowing for more productive rounds. This change will allow patients who are going to be discharged the following day to have a medication reconciliation started by the pharmacist the day prior with the most current information regarding patient condition and disposition. Improvement in early identification of patients to be discharged along with pharmacist managed discharge medication reconciliations will improve patient care and the overall quality of the discharge process. The impact on patient care will be measured by comparing the days of antibiotics and steroids prescribed, number of patients who leave the hospital with medications in hand, and errors in the medication reconciliation on the day of discharge between the study unit and a traditional unit. Improvement in the discharge process will be measured by comparing the time to discharge.

Results: Pending

Conclusion: Pending

Poster #20

PRIMARY AUTHOR'S NAME

Jessica M. Some, PharmD

PRACTICE LOCATION

Cookeville Regional Medical Center

ADDITIONAL AUTHORS

Kinsi Brindley, Pharm.D.

TITLE OF POSTER

Expansion of pharmacy-based ambulatory care services within a regional health system

ABSTRACT

Purpose: Pharmacists are well positioned to work with provider groups and payers on expanded care teams and payment reform initiatives. Medication management and optimization are critical practice functions where pharmacists can positively impact quality of care as well as patient and provider satisfaction. The objective of this study is to identify patients in the region who would benefit most from medication management and optimization and implement a pharmacy service to provide targeted care for those patients.

Methods: This study will be submitted to the Institutional Review Board for approval. Quality metrics will be assessed and the electronic medical record system will be utilized to identify a population of patients within the region who would derive the greatest benefit from medication management and optimization. Pharmacy services will be implemented to target improvement of care in this patient population. The impact of the pharmacy service will be assessed via medication-related performance measures. All data will be recorded without patient identifiers and maintained confidentially.

Results: Pending

Conclusion: Pending

Poster #21

PRIMARY AUTHOR'S NAME

Lauren M. Albertina, PharmD

PRACTICE LOCATION

Fort Sanders Regional Medical Center

ADDITIONAL AUTHORS

Stefanie Reid, PharmD, BCCCP
Rachel Vaughn, PharmD, BCCCP
Christopher Norris, PharmD
Sperry Wheeler, PharmD, BCPS

TITLE OF POSTER

Evaluating the effectiveness of diltiazem weight-based versus fixed bolus dosing for patients presenting to the emergency department in atrial fibrillation with rapid ventricular rate

ABSTRACT

Purpose: For the acute management of atrial fibrillation with rapid ventricular rate (RVR), current guidelines recommend a diltiazem intravenous bolus of 0.25 milligrams per kilogram of actual body weight, followed by an infusion titrated to a goal heart-rate of less than 110 beats per minute. Currently, there is a paucity of studies comparing weight-based versus fixed bolus dosing of diltiazem for this indication. The purpose of this study is to compare the effectiveness of weight-based versus fixed bolus dosing in achieving a goal heart-rate for patients presenting to the emergency department (ED) in atrial fibrillation with RVR.

Methods: This study has been approved by the Institutional Review Board. Utilizing the electronic medical record system and individual data-collection, patients will be identified who presented to a regional referral center ED in atrial fibrillation with RVR. Inclusion criteria includes patients who received a bolus dose of diltiazem, are older than 18 years of age, and if they presented to the ED in atrial fibrillation with RVR. Exclusion criteria includes insufficient documentation of vital signs, no recorded weight, or if they concomitantly received other rate-controlling medications within 30 minutes prior to or after diltiazem administration. Primary outcomes include a composite of the following within 30 minutes after the initial bolus of diltiazem: the percentage of patients who achieved successful rate-control, defined as a heart-rate less than or equal to 100 beats per minute; conversion to normal sinus rhythm; or a heart-rate reduction of at least 20 percent. Secondary outcomes include the percentage of patients who achieved successful rate-control; conversion to normal sinus rhythm; a heart-rate reduction of at least 20 percent; average dose of diltiazem; the incidence of hypotension, hypertension, and bradycardia associated with diltiazem; the time to a heart-rate of less than 100 beats per minute; the number of repeated doses administered; the percentage of patients initiated on the follow-up infusion; and the number of patients who achieved a goal heart-rate of less than 110 beats per minute within 30 minutes of diltiazem administration per current guidelines. All data will be collected and maintained on-site and remain confidential.

Results: Pending

Conclusion: Pending

Poster #22

PRIMARY AUTHOR'S NAME

McKenna C. Childress, PharmD

PRACTICE LOCATION

Fort Sanders Regional Medical Center

ADDITIONAL AUTHORS

Dillon Elliott, PharmD, BCPS, BCCCP
Stefanie Reid PharmD, BCOP
Christopher Norris, PharmD
Corey Cudzilo, MD, ABIM, ABPD, ABCC

TITLE OF POSTER

Use of ascorbic acid, thiamine, and hydrocortisone in septic shock patients

ABSTRACT

Purpose: The purpose of this study is to evaluate the use of ascorbic acid, thiamine and hydrocortisone in patients who are defined as having septic shock. This study will be a retrospective chart review looking at the effect of these therapies on hospital survival, resolution of septic shock by evaluating vasopressor requirements, procalcitonin decrease, mechanical ventilation days, requirement for broad-spectrum antibiotics, and intensive care unit length of stay. Previous studies have shown that using ascorbic acid, thiamine, and hydrocortisone in patients defined as having septic shock could provide a faster resolution of septic shock and may have a mortality benefit.

Methods: This study will be submitted to our institution's Institutional Review Board for approval. This study will be conducted by sorting patients into two groups using a report that will evaluate patients who have a diagnosis code of septic shock between January 2019 to February 2020. The intervention group will be patients who received ascorbic acid, thiamine and hydrocortisone compared to patients who did not serving as the control group. Inclusion criteria will be patients admitted to the Intensive Care Unit at this institution with a diagnosis of septic shock, one broad spectrum antimicrobial agent prescribed, white blood cell count less than four thousand per microliter of blood or greater than twelve thousand microliter of blood OR procalcitonin level greater than or equal to two nanograms per liter, cultures ordered, and vasopressors to maintain hemodynamic stability. Exclusion criteria will be patients with limitations of care such as do not resuscitate or do not intubate, pregnancy, or patients less than eighteen years of age. Primary outcomes evaluated will be hospital length of stay and mortality. Secondary outcomes evaluated will be vasopressor requirements, mechanical ventilation days, length of time broad-spectrum antibiotics are required, safety outcomes, any significant progressive organ damage, and change in procalcitonin.

Results: Pending

Conclusion: Pending

Poster #23

PRIMARY AUTHOR'S NAME

Mary H. Ellis, PharmD, MBA

PRACTICE LOCATION

Fort Sanders Regional Medical Center

ADDITIONAL AUTHORS

Mary H. Ellis, PharmD, MBA
Aubrey Waddell, PharmD, FAPhA, BCOP
Jessica Lee, PharmD
Christopher Norris, PharmD

TITLE OF POSTER

Impact of pharmacist involvement in the medication management of inpatient oncology patients

ABSTRACT

Purpose: Chemotherapy regimens are intricately designed and often contain multiple medications combined with supportive therapies. Regimens typically utilize complex dosing and require dosage adjustments based on renal function, hepatic function and associated toxicities. Studies show that even with the assistance of computerized provider order entry, mistakes are overlooked because the software is not capable of appropriately evaluating chemotherapy regimens and making individualized adjustments. Chemotherapy order review by a pharmacist is a pivotal component to ensure safe and appropriate treatment of patients. The purpose of this study is to evaluate the impact of pharmacist involvement in the medication management of oncology patients.

Methods: This study will be submitted to the Institutional Review Board for approval prior to initiation. Data collected will be presented using descriptive statistics. A report will be run to identify patients receiving inpatient chemotherapy from January 1st 2019 to December 31st 2019. Analyzed chemotherapy regimens will consist of those that are most frequently utilized by inpatients at our institution. Specific regimens of interest include: Rituxan + high dose Methotrexate, 7 + 3, R-CHOP/CHOP, HyperCVAD and HiDAC. A retrospective chart review will be conducted for each administration of chemotherapy in the previously stated population. The following information will be evaluated: cancer diagnosis, treatment regimen, dosage adjustments, delays in therapy, supportive care medications, laboratory values pertinent to each regimen, adverse drug reactions, interventions made by pharmacists and potential interventions that could have been made. The amount and type of pharmacist driven interventions and interventions that could have been made will be analyzed to measure pharmacists' impact on the evaluation of chemotherapy orders. A literature review will be conducted for the appropriate administration and monitoring parameters of the regimens of interest.

All data will be collected without patient identifiers and maintained confidentially.

Poster #24

PRIMARY AUTHOR'S NAME

Parmida Parvaz, PharmD

PRACTICE LOCATION

Fort Sanders Regional Medical Center

ADDITIONAL AUTHORS

William Strozyk, PharmD
Christopher Norris, PharmD

TITLE OF POSTER

Evaluation of beta-lactam allergies and non-guideline based antimicrobial prescribing: a retrospective analysis

ABSTRACT

Purpose: Reported beta-lactam allergies often lead to the use of alternative antibiotics that may be broader in spectrum, less effective, or that have greater potential for adverse effects. The objective of this study is to determine the extent to which meropenem, fluoroquinolones, vancomycin, and aztreonam are used in place of penicillins and/or cephalosporins when not recommended first line per infection treatment guidelines.

Methods: This study will be submitted to the institutional review board for approval. Electronic medical records will be accessed in order to identify patients who have a documented beta-lactam allergy. Inclusion criteria include beta-lactam allergy documentation and use of selected antibiotics: meropenem, fluoroquinolones, vancomycin, aztreonam. Exclusion criteria include non-clear source of infection, age<18, MDR cultures, anaphylaxis reaction as allergy type, and patients on comfort care measures. The following information will then be obtained from the patient profile: age, allergies, sex, weight, labs, diagnostics, infectious disease diagnosis, medication list, provider documentation. Data will be reviewed to determine if meropenem, fluoroquinolones, aztreonam and/or vancomycin were used to treat an infection that could have been appropriately treated with a first line penicillin or cephalosporin, but was avoided due to a reported allergy. The specific allergy reaction will be documented for each patient as part of the data collection process (i.e. rash, nausea, etc.). The rate of meropenem, fluoroquinolones, vancomycin, and aztreonam use will be compared to total volume of use to assess prevalence.

Data will then be used to create recommendations for 1) medication reconciliation technicians when gathering patient histories to better document details of a reported allergy and 2) prescribers to guide antibiotic treatment choices in a reported beta-lactam allergic patient.

Poster #25

PRIMARY AUTHOR'S NAME

Michael C. Petitt, PharmD

PRACTICE LOCATION

Fort Sanders Regional Medical Center

ADDITIONAL AUTHORS

Traci Gilliland, PharmD
Christopher Norris, PharmD

TITLE OF POSTER

Promoting effective transitions of care by providing necessary discharge prescriptions for uninsured patients through collaboration with a local community pharmacy

ABSTRACT

Purpose: Providing needed discharge medications to patients at no cost, while extremely beneficial to uninsured patients, can be costly to hospital pharmacies. Not only does the hospital have to cover direct costs of the medication, but also the indirect costs associated with pharmacists and technicians filling the prescription(s) and properly counseling the patient(s). This purpose of this project is to evaluate outcomes and costs associated with the outsourcing of patient discharge prescriptions to a local 24-hour community pharmacy.

Methods: This project was submitted to our Institutional Review Board for approval. The direct and indirect cost of supplying discharge prescriptions will be documented and calculated prior to outsourcing. This includes time to enter prescription(s), time to fill prescription(s), and time associated with patient counseling. This project will include patients that have received a temporary medication supply at discharge from our hospital. Expense of the personnel will be quantified by the cost of the pharmacist or technician's hourly wage necessary to complete the filling process of discharge medications. The patient assistance process will then be outsourced to a local, 24-hour pharmacy where the prescriptions will be filled, medication provided and the patients appropriately counseled on medications. Once outsourced, the patient will receive a voucher and prescription(s) for the discharge medication(s). These vouchers will be taken to a specific nearby 24-hour pharmacy where the voucher will be accepted as payment and the prescription(s) filled accordingly. Prior to dispensing, the pharmacist at the local pharmacy will provide sufficient counseling. Our pharmacy will then receive a monthly invoice of medications dispensed. The goals of this project are to decrease readmission rates, increase adherence rates, and decrease hospital indirect costs associated with the process of providing discharge prescriptions to uninsured patients at discharge.

Poster #26

PRIMARY AUTHOR'S NAME

Jasmin Valentin, PharmD

PRACTICE LOCATION

Gibbs Pharmacy

ADDITIONAL AUTHORS

Benjamin Gross, PharmD, MBA, CDE, BCPS, BCACP, BC-ADM, ASH-CHC
Kimberly Maxey, PharmD

TITLE OF POSTER

Evaluating the effects of the diabetes prevention program teaching style, group versus one on one education sessions, on weight loss and A1C reduction

ABSTRACT

Purpose: Research has shown that delivering a diabetes prevention program can prevent and or delay the onset of type 2 diabetes. Due to an increasing amount of people developing prediabetes at an earlier age, the Centers for Disease Control and Prevention (CDC) are strongly invested in expanding diabetes prevention programs around the United States. These programs are mostly delivered in group settings, and very few have focused in one on one setting. Therefore, the purpose of our study is to establish the first diabetes prevention program in Lebanon, Tennessee. The program will involve both teaching styles, group versus one on one-education sessions to determine any insight about which teaching style may be more appropriate for our population.

Methods: We utilized the CDC operations manual for establishing a diabetes prevention program. Enrollment is currently underway. We currently have enrolled 13 out of our target 25 participants. Their primary care provider either refers patients or they can self-enroll to participate from this one-year prospective cohort study. Participants will sign an informed consent. A baseline A1C and an initial questionnaire were obtained from participants. A1C can be self-reported if it has been within the last year. Half of the participants were assigned to one on one educational sessions and the remaining half assigned to group session. At the beginning of each educational session, weight, blood pressure, and blood glucose are measured. For the first six months, participants will attend 16 weekly sessions. The remaining six months will be monthly educational sessions. A1C levels will be monitored, and at three months, six months- and one year, participants will complete questionnaires regarding their experiences, barriers, motivation, and overall perceived benefit of the program. We will try to determine if A1C and weight reduction are affected by the teaching style and overall factors being self-reported in the questionnaire. The study will identify potential barriers, motivations, and perceived benefits of the program. The institutional review board committee has approved this research.

Results: Pending

Conclusion: Pending

Poster #27

PRIMARY AUTHOR'S NAME

Michael P. Friebe, PharmD

PRACTICE LOCATION

Lipscomb University College of Pharmacy

ADDITIONAL AUTHORS

Scott D. Nelson, PharmD, MS

TITLE OF POSTER

Translation and Optimization of Clinical Decision Support to Prevent High-risk Medication Prescribing in the Elderly

ABSTRACT

Purpose: Our goal is to migrate clinical decision support (CDS) related to preventing high-risk medication prescribing for elderly patients from Vanderbilt University Medical Center's (VUMC) legacy electronic health record (EHR) to a new vendor EHR system. The CDS alerts warn prescribers about potentially inappropriate medications (PIM) in elderly patients, according to American Geriatrics Society (AGS) recommendations, and provide alternative therapy options if available.

Methods: Pharmacists, subject-matter experts, and stakeholders will review e-prescribing CDS already migrated from VUMC's legacy EHR system to its new system, and identify gaps with the 2019 AGS recommendations (Beer's Criteria). Review results will be used to remedy any missing CDS and update existing CDS as needed to ensure that we have consistent alerting and recommendations when e-prescribing. Actions prescribers can take after an alert displays include: ignoring the alert, cancelling the order, continuing with the original medication, or accepting an alternative option. We will compare prescription rates of PIM between the two EHR systems using a quasi-Poisson regression model. We will use descriptive statics to describe acceptance rates of current CDS and describe the patient population. Prescribing rates will be normalized per 1,000 face-to-face encounters where a medication was prescribed in patients ≥ 65 years of age to account for increases in patient encounter visits over time.

Results: Pending

Conclusion: Pending

Poster #28

PRIMARY AUTHOR'S NAME

Christopher D. Bowens, PharmD

PRACTICE LOCATION

Marcrom's Pharmacy and Wellness Center

ADDITIONAL AUTHORS

Benjamin Gross, Pharm D, MBA, CDE, BCPS, BCACP, BC-ADM, ASH-CHC
Richard Randolph, Pharm D

TITLE OF POSTER

Can a voice call improve adherence rates in patients using oral antidiabetic medications

ABSTRACT

The purpose of the study is to replicate a previous study on non-compliant diabetic patients with a greater sample size with the aim to increase generalizability. We are examining patients that are non-compliant that have taken at least one oral antidiabetic medication. A proportion of days covered (PDC) assesses compliance. The primary outcome is to improve the PDC value of each patient that has low adherence. The secondary analysis is to examine the reason why people are non-adherent and to evaluate the effectiveness of the intervention. The pharmacist calling serves as the intervention in this quality improvement study. Pioneer Rx software is used to filter patients that meet the requirement of being non-adherent to oral antidiabetic medications, which is defined as having a PDC value between 0 and 79 percent. Additionally, the patients must be on at least one oral antidiabetic medication for at least 270 days. Patients were then further filtered based on exclusion criteria: patients already enrolled in the pharmacy sync program, used more than one pharmacy for their prescriptions, and patients < 18 years old. There is a goal of 50 patients participating in the study. Once eligibility is determined before the voice call, the PDC value was recorded for each patient. For the next 19-20 days, the pharmacist called each patient and used the abbreviated Drug Adherence Work-UP (DRAW) tool to conduct the interview and continue to screen for eligibility. After 120 days post-intervention, the PDC's are calculated and recorded again. With the pre-and post-PDC data, a paired t-test is performed using an alpha of <0.05 for significant difference in the group overall and for each individual patient. We hope to show that there is improvement in adherence with a phone call.

Results: Pending

Conclusion: Pending

Poster #29

PRIMARY AUTHOR'S NAME

Melissa M. Slayton, PharmD

PRACTICE LOCATION

Memphis Veterans Affairs Medical Center

ADDITIONAL AUTHORS

Joshua Lerma, 2020 PharmD candidate
Erin Latendresse, PharmD, BCACP
Supriya Ponnapula, PharmD, BCPS, BCACP

TITLE OF POSTER

Retrospective study comparing HbA1c lowering of SGLT2 inhibitors and GLP-1 agonists in a veteran population with uncontrolled type II diabetes mellitus

ABSTRACT

Purpose: Based on recent evidence, there is increased incentive to use glucagon like peptide-1 (GLP-1) agonists and sodium-glucose transporter-2 (SGLT2) inhibitors, particularly in patients at increased risk for macrovascular diabetic complications. However, it is unclear whether GLP-1 agonists or SGLT2 inhibitors should be preferred second line in this patient population as there is little evidence comparing efficacy between the two drug classes. The aims of this study are to compare veteran patients with poorly controlled type 2 diabetes who are newly started on SGLT2 inhibitors and GLP-1 agonists with known cardiovascular benefit (empagliflozin, dapaglifozin, canagliflozin, liraglutide, semaglutide, and dulaglutide). Our primary outcome is HbA1c reduction over the course of a year. Our secondary outcomes are cardiovascular events (including non-fatal myocardial infarction, non-fatal stroke, new onset heart failure, any major adverse cardiovascular events, or death from cardiovascular causes), weight loss, and adverse medication events associated with GLP-1 agonists and SGLT2 inhibitors.

Methods: This study is a retrospective chart review of the electronic medical records from veteran patients of the Memphis Veterans Affairs Medical Center newly initiated on either a GLP-1 agonist or SGLT2 inhibitor between January 2017 and January 2019. The charts of veterans newly initiated on GLP-1 agonists liraglutide, semaglutide, and dulaglutide or on SGLT2 inhibitors empagliflozin and canagliflozin will be reviewed for one year after initiation. We are also collecting and recording baseline demographics and data, HbA1c, anti-diabetic regimen, cardiovascular event history, weight, and any medication adverse events to study medications. We are using descriptive analysis for baseline data and statistical analysis to compare HbA1c lowering, weight loss, cardiovascular events, and adverse medication events between the two groups, GLP-1 agonists and SGLT2 inhibitors. HbA1c, weight, and adverse medication effects will be recorded at baseline, at 3-6 months, and 12-months intervals after initiation of the medications of interest. Student's t-test of the HbA1c and body weight change from baseline will be used to compare the lowering effect of GLP-1 agonists and SGLT2 inhibitors. Cardiovascular events will be studied up to 12 months following initiation of the study medications. Chi-square test or Fisher's Exact test will be used to compare the cardiovascular events of GLP-1 agonists against SGLT2 inhibitors. We will also perform propensity match scoring to account for covariates between patients.

Results: Pending

Conclusion: Pending

Poster #30

PRIMARY AUTHOR'S NAME

Savannah B. Cunningham, PharmD Candidate

PRACTICE LOCATION

Mercer University College of Pharmacy

ADDITIONAL AUTHORS

Joshua Kinsey

TITLE OF POSTER

Pharmacist-led discharge medication counseling and its corresponding impact on medication adherence and hospital readmission rates

ABSTRACT

Purpose: The primary endpoint of this study seeks to analyze pharmacist involvement with a discharge medication counseling bedside delivery program and its effects on medication adherence rates within a six-week period following discharge. The secondary endpoint seeks to analyze effects on hospital readmission rates within the same time-period. Studies have shown that patients who receive counseling and education from a pharmacist at discharge have a significantly decreased rate of hospital readmission rates versus patients who do not receive discharge counseling from a pharmacist.

Methods: The collected data from this study was analyzed via intervention (pharmacist and student pharmacist providing counseling at hospital discharge) versus control (pharmacy technician or clerk delivering medications at discharge with no pharmacist interaction/counseling) Collected patient data (n=81) included patients' disease states, gender, and insurance coverage. Medication adherence was measured at follow-up intervals utilizing the proportion of days covered (PDC) equation, where a score of 80% is required for optimal therapeutic efficacy. Informed consent was provided to all participants regarding a follow-up telephone call or retrieval of medication records through the pharmacy electronic medication records system and hospital electronic medical records system. Approximately 10-15 minute counseling sessions were performed at the time of discharge. Follow up phone calls were conducted for the intervention group at 4 and 6 weeks post-discharge using an eight-item Morisky medication adherence survey to discuss medication adherence and side effects experienced.

Results: This is a continuation of a pilot study by former Community-Based Pharmacy Resident. There were a total of 81 patients enrolled in the study. There were 27 in the intervention arm and 54 in the control arm. These pharmacist-led discharge counseling sessions made a statistically significant difference in medication adherence rates (P=<0.001) as calculated using PDC. The pharmacist-led discharge counseling sessions did not make a statistically significant difference in hospital readmission rates, though it was a clinically and financially significant endpoint.

Conclusions: Pharmacist involvement in a bedside delivery program helps to improve medication adherence in patients being discharged from a hospital. A PDC over 80% is required for optimal therapeutic efficacy, and only the intervention arm reached this threshold. Although this study's sample size was not sufficient to show a statistically significant difference in reduced hospital readmission rates for patients receiving a pharmacist-led discharge counseling session, the findings show clinical significance with significant cost savings and improved patient outcomes.

Poster #31

PRIMARY AUTHOR'S NAME

Cailin D. Harris, PharmD

PRACTICE LOCATION

Perkins Drugs

ADDITIONAL AUTHORS

Justin Kirby
Ben Gross

TITLE OF POSTER

Demonstrating community pharmacist value through innovative workflow enhancement

ABSTRACT

A growing challenge within the community pharmacy setting is demonstrating the wealth of services pharmacists are able to provide to their patients. More so than simply filling prescriptions, pharmacists in the community are well-poised to help manage a patient's comprehensive care. This is done through medication therapy management (MTM) services. This concept is well-researched, and it is widely believed that pharmacists can benefit all parties involved when they practice to the full potential of their license. What often limits the impact a community pharmacist can make, is the amount of time the pharmacists perceive these services take, and the lack of pharmacists available to champion the services. This proposed observational study aims to observe whether technician-identification of medication therapy management opportunities can accelerate patient intervention, allowing pharmacists to save time, and be proactive in this space. This study accomplishes this by adding increased identification of potential MTM opportunities into daily pharmacy workflow, and then enrolling these patients into "Perkins Plus". This is a patient program that places additional attention on patients taking maintenance medications. Technicians, often positioned closest to the patients, would engage patients in directed MTM questioning about their maintenance medicines. If issues arise that call for pharmacist intervention, then technicians will pass on the concern to a pharmacist, either immediately or within the following days. The pharmacist will help the patient by providing advanced pharmacy services, such as complete medication reviews, targeted medication reviews, and disease-state education courses.

Data collection for this study will include the number and type of interventions identified by technicians, and the results of the interventions initiated.

Poster #32

PRIMARY AUTHOR'S NAME

Meron K. Tegete, PharmD

PRACTICE LOCATION

Sango Pharmacy

ADDITIONAL AUTHORS

Benjamin Gross, PharmD
Catherine Meeks, PharmD

TITLE OF POSTER

Impact of independent community pharmacies creating and implementing e-clinical care plans, based on Flip the Pharmacy (Ftp) transformation models, on patient health and economic outcomes

ABSTRACT

Background: Flip the Pharmacy (Ftp) is a community pharmacy transformational project which aims to usher more than 1,000 pharmacies through a two-year transformation process with the objective of reinventing the community pharmacy. The current pharmacy workflow operates around dispensing new and refill medications, the staff overwhelmed by answering calls, contacting physicians and insurance companies, and consumers visiting pharmacy many times a month. These workflow creates inefficiency for pharmacists to perform medication therapy management (MTM) services, and other clinical services. The project is designed to offer a stepwise approach to help transform three key areas of the pharmacy such as workflow, patient care processes and how to lead business. The transformation activities focus on developing the six domains.

Purpose: The goal of Ftp is to turn community pharmacies into sustainable care and business models among clinically integrated networks. The objective of this study is to assess clinical, humanistic, and economic outcomes of incorporating clinical services into independent community pharmacies based on Flip the Pharmacy transformation change package over a 6-month period from October 2019 to March 2019. Once incorporated into workflow, pharmacies can provide a greater variety of comprehensive services to our patients, increase our outreach to the community and collaborate with prescribers in collaborative practice agreement (CPA).

Methodology: Retrospective analysis of e-care plans performed by 9 participating independent community pharmacies as part of the Flip the Pharmacy transformation team. Flip the Pharmacy transformation models will be implemented each month into participating pharmacies measuring outcomes of common chronic disease states including but not limited to diabetes, hypertension, asthma, and COPD. The services implemented varies from months to months depending on the domain focus. Interventions submitted by the team will be identified. Information collected will include patient demographics, A1c baseline and post-intervention, blood pressure, medication adherence, medication errors, immunizations, drug duplications, side effects, recommendations regarding additions to current therapy, and cost-savings. Cost-savings will be assessed using the SNOMED codes submitted with the care plan. The Institutional Review Board at Lipscomb University has reviewed and approved this research project for exemption.

Poster #33

PRIMARY AUTHOR'S NAME

Erin R. Abshire, PharmD Candidate

PRACTICE LOCATION

South College School of Pharmacy

ADDITIONAL AUTHORS

Jay Jasani

TITLE OF POSTER

Medication Use Evaluation: prothrombin complex concentrate [human] and impact of using fixed unit dosing

ABSTRACT

Purpose: Prothrombin complex concentrate [Human] is FDA indicated for the reversal of vitamin K dependent anticoagulation and typically used off-label for reversal of non-vitamin K dependent anticoagulation. Its combination of 4-factors with protein C and S allow it to be used in patients with an unknown but suspected medication history of anticoagulation in the setting of active or life-threatening bleeds. The purpose of this investigation is to review the use of prothrombin complex concentrate [Human] to evaluate compliance to hospital approved guidelines with weight-based dosing and the impact of fixed unit dosing for vitamin K antagonist and factor Xa inhibitors.

Methods: A retrospective review of patients who received prothrombin complex concentrate [Human] from December 2018 until August 2019 was performed. The study did not meet criteria for IRB approval. Previous hospital approved guideline material was obtained and a literature review was performed for any changes to prescribing information, criteria of use, and any new considerations for use. Each patient had the following data points collected: provider, indication, units administered, patient outcome (discharge vs death), past medical history, history of anticoagulant use and duration, other agents used for reversal, lab values (international normalized ratio, hemoglobin, hematocrit, lactic acid), clinical presentation, consults to specialty providers performed, and if the electronic medical record was used in ordering. An analysis comparing the cost of weight-based dosing to fixed dosing was also performed in this study.

Results: During the designated study period there were 12 patients who received prothrombin complex concentrate [Human] . Out of those patients, 11 were emergency room patients and 1 was a patient in the critical care unit. The most common indication for use was GI bleed followed by intracranial hemorrhage. 9 patients met hospital approved criteria of use. The most common reason for non-compliance with hospital criteria was non-life-threatening bleed. Death occurred in 4 out of 12 patients that were administered prothrombin complex concentrate (human); there was no correlation found between administration and cause of death. Out of the patients that died, 3 were taking rivaroxaban and 1 was taking apixaban. Dosing in all situations were appropriate per approved criteria with weight-based dosing of 25 units/kg. 6 out of 12 patients had consults before administration. Only 5 cases had the electronic medical record order set used. Total cost calculated to be greater than $40,000.00. Application of the new fixed dosing recommendations will potentially reduce cost by more than 25%.

Conclusion: There was a recent update to the recommended dosing strategies for both vitamin-k antagonists and factor X inhibitors that involves using fixed dosing. An imp

Poster #34

PRIMARY AUTHOR'S NAME

Emily L. Hugh, PharmD

PRACTICE LOCATION

South College School of Pharmacy

ADDITIONAL AUTHORS

Jarrod Vick, PharmD
Laura Schalliol, PharmD, BCACP
Brittany Schmidt, PharmD, BCACP
Tyler Dougherty, PharmD, BA
Wiyanna Bruck, PharmD, BCIDP
Ashley Sowards, PharmD

TITLE OF POSTER

Assessing aspirin therapy for primary and secondary prevention of cardiovascular events in older adults

ABSTRACT

The American Heart Association/American College of Cardiology guidelines recognize that low dose aspirin use for primary prevention of cardiovascular events in patients 70 years and older is not beneficial and increases the risk for GI bleeding. The purpose of this study is to evaluate how many patients within this age range are on low dose aspirin for primary prevention of cardiovascular events despite the change in guidelines, and to evaluate how often therapy was discontinued for these patients post pharmacist intervention.

This study will be submitted to the Institutional Review Board for approval. Patients 70 years or older on low dose aspirin therapy (81 mg once daily) will be identified through the Medication on Time and Comprehensive Medication Review programs available at MD Pharmacy. Eligible patients will be asked survey questions aimed at determining if they are on primary preventative aspirin therapy, while identifying any additional bleeding risks. Data to be collected will include: patient name, date of birth, current medications, and past medical history. After each phone call, the patient's primary care doctor will be sent a fax summarizing the change in AHA/ACC guidelines as well as the patient's additional bleeding risks for supporting evidence as to why aspirin therapy should be stopped for that patient. One month after the recommendation has been made, follow-up with each patient via phone call will occur to determine if the recommendation to stop aspirin therapy was accepted. All data recorded will remain confidential and any published data will be de-identified.

Results: Pending

Conclusions: Pending

Poster #35

PRIMARY AUTHOR'S NAME

Diamond Melendez, PharmD

PRACTICE LOCATION

South College School of Pharmacy

ADDITIONAL AUTHORS

TITLE OF POSTER

Community pharmacy dispensing patterns of naloxone after implementation of a clinical intervention program

ABSTRACT

Opioid related overdose and death rates are increasing nationwide. Naloxone, an opioid antagonist, reverses the effects of opioids during an overdose which can be lifesaving. The CDC recommends that patients who are prescribed a total opioid dose greater than or equal to 50 morphine milligram equivalents per day (≥50 MME/day) or patients who are taking an opioid and benzodiazepine concurrently should be prescribed naloxone. A clinical intervention program is an automated computer program that identifies such patients and generates an alert to community pharmacists to provide education about opioid overdose and naloxone. The purpose of this study is to compare the number of naloxone prescriptions dispensed before and after the implementation of a clinical intervention program which identifies patients at high-risk of opioid related overdose.

Once the clinical intervention program is implemented into a pharmacy computer system, the program will identify patients who are at high risk of opioid related overdose (≥50 MME/day or concurrently taking at least one opioid and a benzodiazepine). Once patients are identified, pharmacists will receive an alert on the computer screen prompting them to provide patient education about opioid related overdose and naloxone drug information. All pharmacists who participate in this study are naloxone trained and will abide by the Tennessee statewide opioid antagonist collaborative pharmacy practice agreement. This study will be a pre-post observational study conducted using electronic data collected from five community pharmacies in Knox county in Tennessee. To evaluate the dispensing rates of naloxone, medication profiles of these identified patients will be assessed from November 1, 2019 to February 28, 2020. This data will be compared to previous data available for naloxone dispensing rates at the participating community pharmacies in the 2018 calendar year. All data will be de-identified and only accessible to the primary investigator.

Data collection and statistical analysis are ongoing. Results and discussion will be presented after data analysis is complete.

Poster #36

PRIMARY AUTHOR'S NAME

Kayla M. Dillon, PharmD Candidate

PRACTICE LOCATION

University of Tennessee Health Science Center

ADDITIONAL AUTHORS

Kelsey D. Frederick, PharmD
Justin Gatwood, PhD, MPh
Kenneth C. Hohmeier, PharmD

TITLE OF POSTER

Assessing the acceptability, appropriateness, and feasibility of a novel vaccine-based clinical decision support system in the community pharmacy

ABSTRACT

Purpose: The purpose of this study was to evaluate pharmacist-perceived acceptability, appropriateness, and feasibility regarding the incorporation of a new clinical decision support (CDS) intervention with efforts to increase recombinant zoster vaccine second dose vaccination rates in the community pharmacy.

Methods: Data collection consisted of an electronic, web-based survey, which was based on a validated instrument. The survey was made available to all Kroger pharmacists nationwide to assess views of implementation outcomes of acceptability, appropriateness, and feasibility during early implementation stages. The survey consisted of 12 questions total to rate the acceptability, appropriateness, and feasibility of the vaccine CDS intervention. Nine fill-in-the-blank questions followed to gather descriptive information regarding participants, including age, title, years in practice, and other metrics related to their duties. Survey results were analyzed using descriptive and inferential statistics. Correlation analyses were run against pharmacists' age, years in practice, and part-time or full-time employment.

Results: A total of 1128 survey responses were collected across 28 states. Pharmacists agreed or strongly agreed that the CDS intervention was acceptable (78.34%, n=882), appropriate (79.92%, n=882), and feasible (80.53%, n=899). No significant correlations were found.

Conclusion: Data suggest implementation of this CDS intervention was acceptable, appropriate, and feasible to meet the needs of the organization, pharmacists, and patients in the community pharmacy setting. Elements identified may be used in scaling this recombinant zoster vaccine CDS intervention to similar settings and for public health initiatives based on widespread demographics and favorable study results. Future research may use the implications of this study to identify other clinical opportunities for pharmacists.

Poster #37

PRIMARY AUTHOR'S NAME

Clarke A. Farnham, PharmD Candidate

PRACTICE LOCATION

University of Tennessee Health Science Center

ADDITIONAL AUTHORS

Andrea S. Franks
Marques Williams
Thaddeus McGiness
A. Shaun Rowe

TITLE OF POSTER

How has YouTube video quality for e-cigarettes changed?

ABSTRACT

Purpose: YouTube is a frequently used resource for all types of information, including health-related content. The use of e-cigarettes or vaping has continued to grow over the last decade. Consumers access information about e-cigarettes and vaping online, and may use this information to make decisions that affect their health. The purpose of this study was to assess e-cigarettes and vaping YouTube videos from 2013 and 2019 to compare technical quality as well as source of video production.

Methods: At specified dates in 2013 and 2019, YouTube was queried and videos collected, based on preselected search terms including: e-cigarette, electronic cigarette, JUULS, vapor cigarette, atomizer electronic cigarette and power electronic cigarette. Search results were sorted by relevance with the YouTube default settings and video playlists were generated with up to 20 videos per search term. Video playlists were reviewed independently by two reviewers. The technical quality of the videos was assessed using the Medical Video Rating system, a validated scale that assesses video light, sound, angle, resolution, and duration. At the conclusion of video review, each pair of reviewers met to achieve consensus on disagreements in ratings. Statistical analysis was conducted to compare video quality between 2013 and 2019 videos using Mann-Whitney U and Chi-square tests. The source of the video production was also recorded and compared between 2013 and 2019.

Results: A total of 177 videos were reviewed (81 in 2013; 96 in 2019). Mean Medical Video Rating system scores (maximum score =5) were 3.6 (SD 1.0) and 4.7 (SD 0.6) in 2013 and 2019, respectively. ($p < 0.0001$) The proportion of videos with adequate technical quality was higher for each component of the Medical Video Rating system in 2019 compared to 2013, using Chi-square. ($p < 0.05$) While 16% (13 of 81) videos in 2013 were professionally produced, in the 2019 sample, 47.9% (46/96) most were produced professionally. Source of production varied with search term used.

Conclusion: Information about e-cigarettes and vaping is easily accessible on YouTube. While most videos in 2013 were low technical quality productions by laypeople, in 2019, the majority were professionally produced, high technical quality videos. The improvement in video quality could impact the public’s perception of the content.

Poster #38

PRIMARY AUTHOR'S NAME

Brent T. McGlaughlin, PharmD Candidate

PRACTICE LOCATION

University of Tennessee Health Science Center

ADDITIONAL AUTHORS

Mary K. Clarkson, PharmD,
Katelyn M. Wassell, PharmD, BCACP
Shannon W. Finks, PharmD, BCCP, BCPS, FCCP
Kelly C. Rogers, PharmD, BCCP, FCCP, FACC

TITLE OF POSTER

Safety and efficacy of direct-acting oral anticoagulants (DOACs) in the obese population

ABSTRACT

The direct acting oral anticoagulants (DOACs) dabigatran, apixaban, rivaroxaban, and edoxaban are indicated for the prevention of atrial fibrillation (AF) induced stroke or systemic embolism and treatment of venous thromboembolisms (VTE). DOACs are favored over warfarin due to more predictable pharmacokinetic and pharmacodynamic properties, fewer drug and food interactions, and less frequent need for therapeutic monitoring. However, the efficacy and safety of DOACs in the obese population, defined as patients having a body mass index (BMI) of > 30 kg/m2, has not been well studied and as such these agents are currently not recommended by the International Society on Thrombosis and Haemostasis. Interestingly, an “obesity paradox” with DOACs has been reported in that obese patients experience a lower rate of systemic embolic events and less major bleeding compared to normal weight patients.

The primary objective of this retrospective, single-center cohort study is to evaluate the safety and efficacy of DOACs in morbidly obese Veterans at the Memphis VAMC. A SQL query was performed to identify Veterans prescribed a DOAC for at least three months. Morbidly obese patients receiving DOACs were assessed for bleeding, defined as any event within 7 days of last dose, and thromboembolic events. Renal and liver function along with concomitant medications associated with drug interactions with DOACs will be analyzed for any association between use of DOACs in obese patients and potential harm. Data will also be analyzed to identify other potential causes of bleeding or thromboembolic events. Sixty-eight patients have been reviewed with an average BMI is 44.9 ± 4.5 kg/m2. The most common indication for a DOAC is AF (71.6%) and most commonly prescribed DOAC is apixaban (58.2%). Nine patients experienced minor bleeds and five experienced a major bleed. Two patients experienced a VTE while on a DOAC. The conclusions from this study are still in progress.

Poster #39

PRIMARY AUTHOR'S NAME

Presley D. Powers, PharmD Candidate

PRACTICE LOCATION

University of Tennessee Health Science Center

ADDITIONAL AUTHORS

Alexandra E. Mihm, PharmD, BCPS
Andrea S. Franks, PharmD, BCPS

TITLE OF POSTER

Effect of clinical practice guidelines on prescribing of aldosterone antagonists in patients with heart failure with preserved ejection fraction

ABSTRACT

Purpose: The 2017 American College of Cardiology/American Heart Association/Heart Failure Society of America Focused Guideline Update for the Management of Heart Failure provided a new recommendation to consider aldosterone antagonists in select patients with heart failure with preserved ejection fraction (HFpEF) to decrease hospitalizations. The study purpose was to determine if the guideline update is associated with an increase in prescribing of aldosterone antagonists in eligible HFpEF patients.

Methods: This was a retrospective cohort study of adult patients with HFpEF discharged from an academic medical center between June 1, 2014 and March 31, 2018. Patients discharged between June 1, 2014 and March 31, 2017 were assigned to the pre-guideline update group and patients discharged between June 1, 2017 and March 31, 2018 were assigned to the post-guideline update group. The primary endpoint of this study was the proportion of eligible patients with HFpEF receiving an aldosterone antagonist as part of their heart failure regimen at hospital discharge before and after release of the guideline update. Secondary endpoints include re-hospitalization in relation to the management of heart failure and complications of an aldosterone antagonist therapy within 30 days of discharge.

Results: The study included 450 patients, 366 patients in the pre-guideline update group and 84 patients in the post-guideline update group. Sixty-five patients (17.8%) in the pre-guideline update group were on aldosterone antagonists at discharge compared to 13 patients (15.5%) in the post-guideline update group ($p = 0.62$). No significant difference in the addition of aldosterone antagonist therapy at discharge was found between the pre-guideline update group and post-guideline update group (42% vs. 46%, $p = 0.76$). There was also no difference in 30-day readmission between the groups (50% vs 45.5%, $p = 0.71$). Patients on aldosterone antagonists had a higher rate of hyperkalemia within 30 days of discharge compared to patients not on aldosterone antagonists (7.7% vs 1.9%, $p = 0.02$), but similar rates of renal impairment (7.7% vs 5.9%, $p = 0.32$) and hypotension (10.3% vs 5.9%, $p = 0.36$) were observed between groups.

Conclusions: Updated clinical practice guidelines recommending aldosterone antagonists were not associated with immediate changes in prescribing of these agents in HFpEF. Patients who received aldosterone antagonists were more likely to develop hyperkalemia, but did not have higher documented rates of renal impairment or hypotension.

Poster #40

PRIMARY AUTHOR'S NAME

Christina Spivey, PharmD Candidate, PhD

PRACTICE LOCATION

University of Tennessee Health Science Center

ADDITIONAL AUTHORS

Angelica Wilder
Sara Stallworth
James Wheeler
Kenneth Hohmeier
Alissa Moton
Hannah Rovin
Joseph Dylan Stokes
Kaylee Worsham (presenting at meeting)
Marie Chisholm-Burns

TITLE OF POSTER

Evaluation of Naloxone Access and Pricing in Community and Outpatient Pharmacies across Tennessee

ABSTRACT

Introduction: Tennessee has the third-highest rate of opioid prescribing rate (94.4 per 100 persons) in the U.S. The opioid overdose death rate per 100,000 in Tennessee, 19.3, is well above the national rate of 14.9. Given the widespread use of opioids in this state and increasing mortality rate due to opioid overdose, access to naloxone is critical. However, barriers to naloxone access enumerated in the literature are concerning, and previously published studies have not explored naloxone access issues in Tennessee.

Research Question: Objectives were to (1) identify percentage of pharmacies that stock naloxone in the state's most populous counties and those counties with the highest rates of opioid prescriptions; (2) examine pricing of naloxone; and (3) identify barriers to naloxone dispensing.

Study Design: Cross-sectional survey

Methods: A telephone survey was conducted with all community and outpatient pharmacies in select counties in the Western, Middle and Eastern divisions of Tennessee. The most populous county in each division, as well as the five counties with highest opioid prescription rate, were selected. The survey included questions concerning availability of naloxone products, price of products, and barriers to naloxone distribution. Data analysis included descriptive statistics.

Results: In the Western division, response rate was 61.8% (110 of 178 eligible pharmacies). The majority of these pharmacies (70.4%) participate in the state's opioid-related collaborative practice agreement. Narcan is available at 93.6% of pharmacies, with mean cash price of $131.67 (SD=$25.50). The most commonly reported barriers to naloxone access are cost (reported by 69.1% of pharmacies), issues with prior authorization (52.7%), and lack of insurance coverage (48.2%). Results for the Eastern and Middle divisions of Tennessee will also be presented.

Conclusions: Although naloxone, is widely available, issues pertaining to cost act as barriers to access. Future studies should develop and evaluate strategies to reduce barriers to naloxone access.

Poster #41

PRIMARY AUTHOR'S NAME

Jillian B Morgan, PharmD Candidate

PRACTICE LOCATION

VA Tennessee Valley Healthcare System

ADDITIONAL AUTHORS

Sebastian Skordallos PharmD, MM, BCPS
Timothy C. Morgan PharmD

TITLE OF POSTER

Evaluation of discontinuing bolus insulin and substituting with a glucagon-like peptide-1 agonist (GLP-1 agonist) in veterans with poorly controlled type 2 diabetes while on a basal-bolus insulin regimen

ABSTRACT

Purpose: The Standards of Medical Care in Diabetes provides well-established, evidence-based recommendations for intensification of Type 2 Diabetes regimens ultimately leading to initiation of basal-bolus insulin therapy. Despite basal-bolus insulin therapy, many are still unable to achieve adequate glycemic control and are more susceptible to weight gain, severe hypoglycemic episodes, and insulin resistance. Unfortunately, there are no recommendations beyond basal-bolus insulin therapy for patients who are unable to achieve their target A1c. While there is evidence showing the utility of GLP-1 agonists in addition to a basal-bolus insulin regimen, currently no evidence exists which evaluates the strategic conversion from basal-bolus insulin to a basal insulin plus GLP-1 agonist regimen. The purpose of this study was to identify if replacement of bolus insulin with a GLP-1 agonist is an effective treatment approach in patients with Type 2 Diabetes who are presently uncontrolled on a basal-bolus insulin regimen.

Methods: This was a multi-site, single center, retrospective study. Manual chart extraction was performed within the Computerized Patient Record System (CPRS) for all patients who were prescribed bolus insulin and a GLP-1 agonist between January 1st, 2018 and March 31st, 2019. Inclusion criteria consisted of a diagnosis of Type 2 Diabetes, baseline A1c greater than 7 percent, and the initiation of a GLP-1 agonist with subsequent discontinuation of bolus insulin. Exclusion criteria included initiation of any additional antidiabetic medications during the study period or documented poor compliance or non-adherence to the prescribed regimen. Baseline A1c was obtained within 3 months prior to the study start date. Follow-up data was collected at 3 months and 6 months after conversion from bolus insulin to the GLP-1 agonist.

Results: There were 77 patients enrolled with an average age of 67.3 years, hemoglobin A1c of 8.82 percent, weight of 112.2 kg, bolus insulin total daily dose of 57 units, basal insulin total daily dose of 68 units, and a c-peptide level of 3.83 ng/mL. The primary endpoint of hemoglobin A1c reduction showed a 1.05 and 1.36 percent reduction at 3 and 6 months respectively. The average weight loss from baseline declined 2.5 kg and 4.9 kg at 3 and 6 months respectively. The average basal insulin total daily dose declined 5.7 units and 4.2 units at 3 and 6 months respectively. C peptide values >1 ng/mL appeared to correlate with positive hemoglobin A1c reduction.

Conclusion: As this study suggests, the substitution of prandial insulin with a GLP-1 agonist has the potential to improve glycemic control, simplify complex diabetic regimens, and promote weight loss in Type 2 Diabetics who are poorly controlled on basal-bolus insulin therapy. C-peptide results within normal limits appears to be a promising predictor of GLP-1 agonist success.

Poster #42

PRIMARY AUTHOR'S NAME

Darrow G. Thomas, PharmD

PRACTICE LOCATION

Vanderbilt University Medical Center

ADDITIONAL AUTHORS

Scott Faw, PharmD
Nikki Pitts, PharmD, BCPS
Audra Jants, RN
Robert Frankenfield, MD

TITLE OF POSTER

Creation and implementation of new protocols for pain management, in order to decrease opioid usage, within the emergency department of the Vanderbilt Wilson County Hospital.

ABSTRACT

Purpose: The opioid overdose epidemic has been a constant problem over the past two decades. Currently, according to the CDC, over two million Americans are addicted to opioids. Vanderbilt Wilson County Hospital is located within Lebanon, Tennessee, which is an area with high rates of opioid overdoses and abuse. With many opioid exposures occurring within emergency care, the goal of this project is to reassess patient need for opioids and to find alternatives for pain management. We anticipate that the results can assist the institution in developing protocols, education, and services that lead to a decrease in opioid exposure, especially to opioid naïve patients.

Methods: Study investigators will initially assess opioid use within the emergency department for the previous 12 months. This will be done by collecting all emergency department opioid doses that were ordered and converting the data into morphine milligram equivalents (MME), per patient as well as per provider. Once the data has been analyzed, the investigators will then use updated strategies for pain management using alternatives to opioids, like ketamine and ketorolac, in order to create a protocol that serves the patients pain needs, while reducing unnecessary opioid exposure.

Results: Pending

Conclusion: Pending