Virtual SERC 2020

A Administration (ADM) B Ambulatory Care (AMB) C Cardiology (CAR) Y Community Pharmacy (CP)

R Critical Care/Emergency Medicine (CCM) G Geriatrics (GER) I Infectious Disease (ID)

L Internal Medicine (IM) M Medication Safety (MES) N Neurology (NEU) O Oncology (ONC)

P Pain Management (PM) D Pediatric (PED) S Psychiatric Pharmacy (PSY) T Transitional Care (TC)

1 Transplant (TRP)

APRIL 23 • THURSDAY

8:00am – 9:00am

Welcome to the 2020 Virtual Southeastern Residency Conference

Presenters: Naadede Badger-Plange

Welcome to the 2020 Virtual Southeastern Residency Conference. Please view the welcome video here: http://uofgeorgia.adobeconnect.com/pubzo8fpr6dx/. The welcome includes important information!

9:00am – 9:15am A **6 - Evaluating the Impact of Incorporating Pharmacy Students into the Admission Medication History Process at an Academic Medical Center** Room F

Presenters: John Awad

Evaluating the Impact of Incorporating Pharmacy Students into the Admission Medication History Process at an Academic Medical Center

John Awad, Aaron Will, Nicole Panosh, Lindsey Burgess, Paul Bush

DUH12 Duke University Hospital (Administration and Leadership with Masters)

Background: Medication history collection is the process of identifying the most accurate list of all medications that the patient is taking, including name, dosage, formulation, frequency and route of administration. Several studies have reported that high-quality medication histories identify medication discrepancies and improve continuity of care. The addition of pharmacy students to this process can expand resources and provide valuable direct patient care experience. The purpose of this study was to assess the effectiveness of a student medication history program at an academic medical center.
Methodology: This study was a quasi-experimental, observational, pre-post study of patients admitted to DUH. All patients admitted to DUH who had not had their medication history performed by another pharmacy staff member during their admission were eligible for inclusion in this study. Patients admitted between 10/1/2018 and 1/31/2019 who met inclusion criteria were included in the pre-implementation, or control group. Patients who were admitted between 10/1/2019 and 1/31/2020 who met inclusion criteria were included in the post-implementation, or intervention group. In the post-implementation phase, all pharmacy students on an advanced pharmacy practice experience clinical rotation were expected to complete 2 medication histories per rotation day. Preceptors were expected to review and sign-off the student medication history within 24 hours of student completion. The primary outcome of the study was the number of student medication histories completed in the pre vs. post-implementation phases. Secondary outcomes included mean time from patient admission to student medication history collection, mean time from student medication history collection to pharmacist review and the number of student medication histories signed off by the preceptor within 24 hours of student completion.
Results: A total of 2.65 med histories completed per student per month in the pre-implementation phase vs. 16.30 med histories completed per student per month in the post-implementation phase. No statistically significant differences in secondary outcomes.
Conclusions: The implementation of a standardized student medication history program significantly improved the rate of medication histories completed by students on inpatient clinical rotations, while the time of medication history collection and pharmacist review & completion did not change.

Objective: Define the medication history collection process and the value of incorporating students into this process.
Self Assessment Question: What information is essential to be reviewed and verified when completing a medication history?

You can access the presentation using the following link: https://youtu.be/maZsHbCK4Ps

9:00am – 9:15am B **1 - Enhancing Clinical Pharmacy Specialist Involvement in Pneumococcal and Influenza Vaccinations within a Veterans Affairs Health Care System** Room A

Presenters: Michelle Adams

Enhancing Clinical Pharmacy Specialist Involvement in Pneumococcal and Influenza Vaccinations within a Veterans Affairs Health Care System

Adams M, Cardoza A, Gordon A, Neighbors L, Pooler S

CAVA1 Central Alabama VA Health Care System

Background: Pneumococcal and influenza vaccines are effective tools for preventing disease, hospitalizations, death, and subsequent financial burden. Central Alabama Veterans Health Care System vaccination rates are below national averages. The involvement of Clinical Pharmacy Specialists (CPS) in vaccine recommendations was recognized as an area of improvement. The purpose of this project is to determine if an educational campaign is effective in increasing CPS pneumococcal and influenza vaccine interventions.

Methodology: A pharmacist-led educational campaign geared towards CPS was launched October 4, 2019. Education included two in-services and six emails delivered bimonthly through December 16, 2019. Topics covered included pneumococcal and influenza recommendations, facility vaccination events, documentation of interventions, and quick-reference handouts. The total number of CPS recommendations and vaccines ordered were compared pre- and post-education. Pre-education data included all CPS vaccine interventions documented in the electronic health record between October 4, 2018 and January 31, 2019. Post-education data included all CPS vaccine interventions documented in the electronic health record between October 4, 2019 and January 31, 2020. Data was collected through a health factor and immunization order report.

Results: CPS vaccine interventions increased by 1050% and vaccines ordered by 75% following a pharmacist-led educational campaign.

Conclusions: A pharmacist-led educational campaign may improve CPS involvement in vaccine recommendations.

Objective: Identify the most important predicting factor for adult immunization.

Self Assessment Question: According to the Centers for Disease Control and Prevention, what is the most important predicting factor for adult immunization?

https://vimeo.com/406082691

9:00am – 9:15am C **2 - Clinical Characteristics and Outcomes Associated with Carvedilol Compared to Metoprolol Succinate in Patients with Acute Decompensated Heart Failure** Room B

Presenters: Jennifer Adema

Clinical Characteristics and Outcomes Associated with Carvedilol Compared to Metoprolol Succinate in Patients with Acute Decompensated Heart Failure

Jennifer Adema, Kacy Whyte, Erika Giblin

VMCG1 Vidant Medical Center

Background: Brain natriuretic peptide (BNP) is a strong independent predictor of mortality in patients with heart failure with reduced ejection fraction (HFrEF). There is a paucity of evidence, however, directly evaluating the impact of guideline-directed beta-blockers on BNP in patients admitted to the hospital for acute decompensated heart failure. This study was conducted to assess BNP concentrations as a measure of clinical efficacy of carvedilol versus metoprolol succinate therapy for HFrEF.

Methodology: Single center, retrospective, cohort study. Eligible patients were ≥ 18 years with carvedilol or metoprolol succinate as a home medication and admitted with a diagnosis of acute decompensated heart failure. Data were obtained through electronic health record reports and evaluation of patient medical records.

Results: A total of 1255 patients were screened and 114 were included for analysis. The change in BNP from baseline to admission was not different between the group maintained on carvedilol vs metoprolol outpatient (carvedilol vs metoprolol, 1162 vs 1276; p=0.62). All secondary endpoints were similar between the two groups, except for MAP upon admission which was significantly lower in the metoprolol group (95 vs 83; p=0.0008).

Conclusions: Preliminary results suggest that there was no difference in carvedilol vs metoprolol in the change in BNP from baseline to admission for acute decompensated heart failure. However, this study was underpowered which limits its ability to detect a difference.

Objective: Describe the effect of carvedilol versus metoprolol succinate on BNP in patients with acute decompensated heart failure.

Self Assessment Question: Which beta-blocker is more effective at decreasing BNP in patients with heart failure with reduced ejection fraction?

https://youtu.be/JVN9gMIIKX4

9:00am – 9:15am C **8 - Evaluation of Sacubitril/Valsartan vs. Spironolactone on Readmission Rates in Patients with Heart Failure Optimized on ACEi/ARB and Beta Blockers** Room H

Presenters: Carrie Baker

Evaluation of Sacubitril/Valsartan vs. Spironolactone on Readmission Rates in Patients with Heart Failure Optimized on ACEi/ARB and Beta Blockers

Carrie Baker, Teresa Jones, Dustin Bryan, Brock Dorsett, Riley Bowers
CFVM Cape Fear Valley Medical Center

Background: The 2017 ACC/AHA Heart Failure guidelines indicate that patients with reduced ejection fraction should receive an angiotensin-converting enzyme inhibitor or angiotensin receptor blocker (ACEi/ARB) and beta blocker unless contraindicated. There is limited published evidence on the order for which additional maintenance therapies should be initiated. The aim of this study was to compare 30-day all cause readmission rates between patients with NYHA functional class II-IV heart failure with reduced ejection fraction (HFrEF) who were transitioned to sacubitril/valsartan versus those receiving the addition of spironolactone therapy.

Methodology: This retrospective cohort study used data from patients with HFrEF NYHA classifications II-IV who were on guideline-recommended ACEi/ARB and beta-blocker therapy. Those receiving the addition of spironolactone were compared to patients whose ACEi/ARB was transitioned to sacubitril/valsartan therapy. The primary endpoint was 30-day all-cause readmission rates. Secondary endpoints included 90-day readmissions, changes in diuretic dose and blood pressure, drug-related adverse events, and utilization of a medication delivery service at discharge.

Results: A total of 258 patients were included in this study. Patients receiving spironolactone therapy had slightly lower 30-day all-cause readmissions versus patients transitioned to sacubitril/valsartan, but the results were not statistically significant (8.53% vs 13.95%, p=0.167). Significantly more patients receiving spironolactone (55.0%) utilized the medication delivery service at discharge compared to those transitioned to sacubitril/valsartan (32.6%), $p<0.0005$. There were no significant differences in other secondary endpoints.

Conclusions: While there was no difference between groups, both therapies demonstrated lower 30-day readmission rates than previously published literature and research at our health system. The results of this study also highlight the importance of ensuring proper medication optimization and delivery prior to discharge.

Objective: Discuss inpatient heart failure therapy optimization for patients already receiving appropriate initial maintenance medications.

Self Assessment Question: Which of the following patients is eligible to receive either sacubitril/valsartan or spironolactone prior to discharge?

https://vimeo.com/406854345

9:00am – 9:15am R **4 - Quality of medication histories at a community teaching hospital** Room D

Presenters: Nathan Allen

Evaluation of medication histories at a community teaching hospital

Nathan Allen, Phillip Mohorn, Amy Knauss
NGMC1 Northeast Georgia Medical Center

Background: Medication reconciliation is an integral part of transitions of care within a hospital system. Pharmacy involvement in the process has been shown to reduce medication errors and adverse events when compared to other healthcare professionals. The primary objective of this study is to evaluate the completeness and accuracy of the prior to admission medication lists obtained by nursing and emergency department pharmacy technicians at our institution.
Methodology: This IRB approved study is a retrospective chart review of the current medication history collection process with a comparison of nursing obtained medication lists to pharmacy technician obtained medication lists. The study included a medication history collection process improvement, that involved reeducation and training for pharmacy technician staff, as well as an emergency department pharmacist verification of prior to admission medication lists that contain high risk medications. Patients who are over the age of 18 years old and admitted inpatient from the emergency department were included. Patients were excluded if unable to report current medication list or provide pharmacy information. Data collected included completeness and accuracy of the prior to admission medication list and baseline characteristics.
Results: One hundred fifty patients were included in the study, divided into three groups of fifty patients. These groups were identified as Nursing, Pharmacy Technicians Pre-Intervention, and Pharmacy Technician Post-Intervention. Completeness was not statistically different. (p=0.169) Accuracy was found to be statistically different with 86% of medication lists in the Pharmacy Technician Post-Intervention group found to be accurate compared to 44% and 46% for the Nursing and Pharmacy Technician Pre-Intervention groups respectively. (p= <0.005)
Conclusions: The medication history collection process intervention improved accuracy in collecting medication histories. Expansion of pharmacy involvement in medication history collection should be considered with an emphasis on adequate pharmacy staffing to facilitate.
Objective: Describe the importance of collecting a quality medication history at transitions of care in the healthcare system.

Self Assessment Question: Which parameter in the primary endpoint was found to be statistically different between the study groups?
A. Completeness
B. Accuracy
C. Neither completeness nor accuracy
D. Both completness and accuracy
Answer: B

Youtube link to presentation: https://youtu.be/jJf9sRKb4L0

9:00am – 9:15am | **12 - Impact of rapid diagnostic testing on antimicrobial stewardship treatment optimization for streptococcal bacteremia** Room L

Presenters: Sarah Beargie

Impact of rapid diagnostic testing and antimicrobial stewardship treatment recommendations on streptococcal bacteremia

Sarah M. Beargie; George E. Nelson; Matthew Felbinger; Whitney J. Nesbitt
VUMC1 Vanderbilt University Medical Center

Background: Antimicrobial therapies can be optimized promptly when rapid diagnostic testing is utilized to provide species-level identification of pathogens. Incorporating Verigene®, a rapid microarray-based assay, results with antimicrobial stewardship (AS) interventions has shown improved patient outcomes in gram-positive bacteremia, but studies evaluating impact in streptococcal bacteremia are lacking. Our study aims to compare antibiotic optimization and patient outcomes before and after Verigene® implementation for streptococcal bacteremia.

Methodology: Single-center, pre-post, retrospective study at an academic medical center in patients ≥18 years of age with streptococcal spp. recovered by blood isolates. Patients were classified in periods before (April 2015 – April 2017) and after (April 2017 – April 2019) Verigene® implementation. The primary outcome was time to appropriate antibiotic therapy based on institutional AS in the pre- and post-Verigene® implementation groups. Secondary outcomes included compliance with institutional AS antibiotic recommendation, in-hospital mortality, hospital and ICU length of stay, duration of inpatient antibiotics, and AKI for subgroup continued on vancomycin.

Results: The study included 339 patients with 196 in the pre-Verigene® group and 143 in the post-Verigene® group. Median time to institutional AS recommended antibiotic therapy was 5.4 days in the pre-Verigene® group and 5.5 days in the post-Verigene® group (p=0.7490). There was a trend toward improved compliance with VASP-recommended antibiotics for post-Verigene compared to pre-Verigene (20.3% vs. 16.3%, p=0.3912). There were no significant differences in ICU or hospital length of stay, in-hospital mortality, or duration of inpatient antibiotics. For safety, there was not a significant difference in acute kidney injuries between the two groups for the subgroup of patients continued on vancomycin (p=0.2249).

Conclusions: The implementation of Verigene® did not impact antibiotic optimization and patient outcomes.

Objective: Describe the impact of Verigene® implementation on antimicrobial stewardship recommendations for antibiotic optimization in streptococcal bacteremia.

Self Assessment Question: True or False: Did the implementation of Verigene® impact the time to the recommended appropriate antibiotic in streptococcal bacteremia?

9:00am – 9:15am | **5 - CASPER UTI: Carbapenem-sparing options for extended spectrum β-lactamase (ESBL)-producing enterobacteriaceae urinary tract infections (UTI)** Room E

Presenters: Daniel Anderson

CASPER UTI: Carbapenem-sparing options for extended spectrum β-lactamase (ESBL)-producing enterobacteriaceae urinary tract infections (UTI)

Daniel Anderson, Benjamin Albrecht, Ashley Jones, Jesse Jacob, Sujit Suchindran
EUID2 Emory University Hospital Midtown (Infectious Diseases)

Background: We aimed to evaluate whether or not the use of non-carbapenem, β-lactam antibiotics are non-inferior to carbapenem antibiotics for the treatment of UTIs caused by ESBL-producing organisms, defined by hospital length of stay.

Methodology: Utilizing Emory's Clinical Data Warehouse, a report cross referencing urine culture isolates with ceftriaxone resistant Enterobacteriaceae species resulting between April 1, 2013 and April 30, 2018 was generated. A retrospective chart review of the electronic medical record (Cerner PowerChart) was conducted on all identified patients that meet the inclusion criteria to determine the outcomes associated with treatment with carbapenems vs non-carbapenem β-lactams (NCBLs).

We also identified the impact on other factors such as clinical response, microbiological eradication, days of antimicrobial therapy per 1000 patient days, in-hospital mortality, 30-day readmission rate, days to transition to oral antimicrobials, rate of relapsed infection, defined as growth of the same organism within 30 days, secondary infection with a multi-drug resistant organism, defined as having resistance to at least one agent in three separate classes of antimicrobials, secondary infection with a carbapenem-resistant organism, and rate of Clostridium difficile infection (CDI) within 8 weeks.

Results:There was no difference in length of stay between patients treated with NCBLs and those treated with carbapenems (13 days vs 15 days, p=0.66). There were significant differences in rates of microbiological eradication (98% vs 92%, p=0.0016), time to transtion to oral therapy (5 days vs 9 days, p<0.0001), duration of therapy (7 days vs 10 days, p<0.0001), and rates of relapsed infection (3% vs 13%, p=0.0003) all favoring NCBLs.

Conclusions: NCBLs may be a viable carbapenem-sparing option for the treatment of UTIs caused by ESBL-producing organisms. The decision to transition from empiric to definitive treatment for UTIs caused by ESBL-producing organisms should be based on clinical improvement, not phenotypic resistance alone.

Objective: Describe how non-carbapenem, β-lactam antibiotics may eradicate urinary tract infections caused by ESBL-producing organisms despite phenotypic indicators of resistance.

Self Assessment Question: Do some β-lactam antibiotics concentrate sufficiently in the urine to overcome resistance caused by β-lactamase producing organisms?

https://www.youtube.com/watch?v=BrC4RoNumis&t=6s

9:00am – 9:15am | **9 - Impact of Long-Acting Lipoglycopeptide Use in Hospitalized Patients** | Room I

Presenters: Ashley Barahona

Impact of Long-Acting Lipoglycopeptide Use in Hospitalized Patients
Ashley Barahona, Matt Brown, Seth Edwards, Robert Oster, Rachael Lee
UAHB1 University of Alabama at Birmingham Hospital

Background: Long-acting lipoglycopeptides (laLGPs) offer an attractive alternative to the current standard of care for the treatment of various Gram-positive infections. Despite the high cost of these agents, the unique abbreviated dosing requirements may yield significant cost savings by way of preventing hospital admissions or reducing lengths of stay for patients who may not be candidates for outpatient parenteral antimicrobial therapy (OPAT). Dalbavancin and oritavancin were recently added to the inpatient formulary at UAB Hospital for the purposes of (1) preventing hospital admission of patients with uncomplicated skin and skin structure infections, and (2) facilitating early discharge of patients who would not otherwise be candidates for OPAT. The primary objective of this study was to assess the clinical effectiveness and safety of long-acting lipoglycopeptides in the treatment of a variety of Gram-positive infections, particularly in those persons who inject drugs (PWID).

Methodology: A retrospective analysis was conducted for all adults who received at least one dose of dalbavancin or oritavancin while at UAB Hospital from March 2018 to September 2019. Data for PWID within the population of patients who received a laLGP was analyzed and compared to a similar group of PWID who previously received usual care for a Gram-positive infection at UAB Hospital.

Results: Observed clinical success was 73.7% in PWID who received a laLGP versus 90% in PWID who received usual care (p=0.24). Differences in safety between groups were not statistically significant (p=1.0). Average length of stay for PWID who received a laLGP was approximately one week less than that for PWID who received usual care.

Conclusions: Given the lack of statistical difference between observed clinical success and safety amongst PWID who received a laLGP versus usual care in this study, laLGPs may be a reasonable alternative to usual care for a variety of Gram-positive infections.

Objective: Describe the impact of using long-acting lipoglycopeptides in hospitalized patients.
Self Assessment Question: Which of the following is true of the impact noted from use of long-acting lipoglycopeptides in patients at UAB Hospital?

9:00am – 9:15am L **10 - HOSPITAL-WIDE IMPLEMENTATION OF SLOW INTRAVENOUS PUSH ADMINISTRATION OF ANTIBIOTICS** Room J

Presenters: Andrea Barnes, Andrea (Andye) Barnes

HOSPITAL-WIDE IMPLEMENTATION OF SLOW INTRAVENOUS PUSH ADMINISTRATION OF ANTIBIOTICS
Andye Barnes, Aayush Patel, Matthew McAllister, Rebecca Cummings
PCRM1 Piedmont Columbus Regional Midtown
Background: To evaluate the impact of a hospital approved protocol on time to initial slow intravenous push (IVP) antibiotic administration as well as hospital length of stay and financial implications of the protocol.
Methodology: This was an IRB-approved, pre–post implementation of slow IVP antibiotic protocol study undertaken during two independent two-month time periods. Data was collected on 200 eligible patients ≥18 years of age receiving intravenous antibiotics (aztreonam, cefazolin, cefoxitin, cefepime, ceftriaxone and ertapenem) during the pre-implementation phase and post-implementation phase. An online survey was sent to the nursing staff after the implementation of the protocol to assess nurse satisfaction.
Results: There was a statistically significant decrease in the overall average time to initial antibiotic administration of 36 minutes (p=0.0003). Cefepime had a statistically significant decrease in time to initial antibiotic administration of 33 minutes (p=0.003). The average hospital length of stay was 13 days for patients in both pre-implementation and post-implementation groups. Over a two-month time period, approximately $36,000 was saved which would equate to an annual savings of approximately $214,000. There were four reported adverse drug reactions associated with IVP method. Three reactions were infusion related phlebitis and one was severe nausea and vomiting. Approximately 40% of nurses were in favor of slow IVP antibiotics.
Conclusions: This study found that the implementation of slow IVP antibiotic administration significantly reduced the time to initial antibiotic administration compared to the long infusion method with no difference in hospital length of stay between both groups and substantial cost savings.
Objective: Discuss the outcomes associated with the hospital wide implementation of intravenous push administration of antibiotics at Piedmont Columbus Regional Midtown.
Self Assessment Question: Did the implementation of slow intravenous push administration of antibiotics reduce the time to antibiotic administration compared to long infusion method?

9:00am – 9:15am

3 - Evaluating Rates of Central Nervous System Relapse in Newly Diagnosed Adult Patients with Acute Lymphoblastic Leukemia at an Academic Medical Center Room C

Presenters: Pamiz Alibhai

Evaluating Rates of Central Nervous System Relapse in Newly Diagnosed Adult Patients with Acute Lymphoblastic Leukemia at an Academic Medical Center

Pamiz Alibhai,Star Ye,Courtney Hebert, Aravind Chodavarapu, Pankit Vachhani

UAHO2 University of Alabama at Birmingham Hospital (Oncology)

Background: Acute lymphoblastic leukemia (ALL) is a hematological malignancy characterized by proliferation of lymphoid progenitor cells in the bone marrow, blood, and the central nervous system (CNS). ALL chemotherapy treatment and prophylaxis regimens for CNS disease are directed at lymphoblasts that have penetrated the spinal fluid and meninges. These regimens include intrathecal (IT) methotrexate, cytarabine, or hydrocortisone in combination or as monotherapy. Patients who do not receive prophylaxis against CNS disease have a 50-75% chance of recurrence. Previous studies have identified certain risk factors predictive of CNS relapse such as elevated lactate dehydrogenase (LDH) and high white blood cell (WBC) count. There is, however, a paucity of literature reporting the incidence of CNS relapse and evaluating criteria for risk of CNS relapse.

Methodology: This single center, retrospective study included newly diagnosed adult patients with ALL treated between July 31st, 2013 and July 31st, 2019. Data on patient demographics, type of disease, and treatment characteristics were analyzed. Patients diagnosed and initially treated at outside centers were excluded. Patients with any criteria for higher risk of CNS relapse were compared to patients with no criteria (low risk).

Results: This study included 90 patients with the following demographics: median age 46 years, 87% with B-cell ALL, 2 patients with CNS at baseline, and 67% classified as having risk factors for CNS relapse. The incidence of CNS relapse in patients was 5 (5.5%), all of which has at least one criteria for high risk of CNS relapse. Patients with high risk of CNS relapse had similar rates of complete response (82.7% vs. 80.3%), but much higher rates of any relapse (39.3% vs. 17.2%), compared to patients in low risk group.

Conclusions: This study showed the incidence of CNS relapse in ALL patients whose treatment was initiated at our center to be 5.5%. All five of the patients that had CNS relapse were classified as high risk of CNS relapse based on baseline characteristics. Patients with high and low risk of CNS relapse received similar doses of IT treatments. Patients with CNS relapse had received more IT treatments overall. Rate of CNS relapse at our center was in the lower range of that reported, 4 to 11%, in other studies. Classification as being high risk of CNS relapse was associated with lower overall survival and higher rates of any relapse and CNS relapse. Further studies are needed to evaluate the ideal number of treatments needed for patients who are at high or low risk of CNS relapse.

Objective: Identify the incidence of CNS relapse in patients with acute lymphoblastic leukemia treated at an academic medical center

Self Assessment Question: Which of the following is the reported incidence of CNS relapse in adult patients with ALL?

9:00am – 9:15am P **11 - Enhancing the role of the Clinical Pharmacy Specialist in non-opioid pain management for a Veteran population** Room K

Presenters: Jordan Bates

Title: Enhancing the role of the Clinical Pharmacy Specialist in non-opioid pain management for a Veteran population

Authors: Jordan Bates, Molly Howard, Rashida Fambro, Lynsey Neighbors
Central Alabama VA Health Care System – Montgomery, AL

Presentation Objective: Describe a clinical pharmacy service focused on providing non-opioid pain management for patients in primary care.

Self-Assessment Question: What were the top three non-opioid therapies prescribed by the pharmacist?

Background: The treatment of chronic pain has become more challenging in recent years, with guidelines recommending increased use of non-opioid therapy due to risks of adverse effects associated with opioid use. The purpose of this quality improvement project was to define a role of the clinical pharmacy specialist in treatment of moderate to severe chronic pain in the primary care setting.

Methods: Patients were included if they were currently receiving primary care at the Montgomery VA clinic, receiving chronic opioid therapy, reported pain scores $\geq$ 6/10 at their last primary care appointment, and trialed $\leq$ 5 of non-opioid pain medication classes. Patients were contacted by phone or in conjunction with a primary care appointment to determine interest in enrollment for pain treatment by a pharmacist. An improving Pain intensity, interference with Enjoyment of life, and interference with General activity (PEG) score was taken at each medication management visit following enrollment. Additional data collected included the number and type of medication changes initiated and the number and type of non-pharmacologic interventions made. The primary outcome was the change in PEG scores in enrolled patients.

Results: Out of 14 patients treated, there was a 0.2 point reduction in Pain Intensity score (p-value: 0.588), a 0.9 point reduction in Enjoyment of Life Score (p-value: 0.173), a 1.3 point reduction in General Activity Score (p-value: 0.102), and a 0.8 point reduction in overall PEG score (p-value: 0.084) at the end of the period.

Conclusion: Clinical pharmacy specialist implementation of non-opioid pharmacotherapy for chronic pain management did not result in a statistically significant difference in therapeutic impact through PEG scores. However, greater benefit from CPS implementation may be seen with longer treatment periods

Link to Presentation:
https://youtu.be/EyrVI8dRon4

9:00am – 9:15am D **7 - Therapeutic drug monitoring of voriconazole and posaconazole for prophylaxis and treatment of invasive fungal infections in the pediatric population** Room G

Presenters: Melanie Ayarza

Therapeutic drug monitoring of voriconazole and posaconazole for prophylaxis and treatment of invasive fungal infections in the pediatric population

Melanie Ayarza, Travis Heath, Beiyu Liu
DUHD1 Duke University Hospital

Background: Limited data exist on the use of voriconazole and posaconazole in the pediatric population. The aim of this study was to assess the plasma concentrations, safety, and efficacy of oral voriconazole and intravenous voriconazole and posaconazole to determine effective dosing regimens for pediatric patients. By establishing empiric-dosing regimens for pediatric patients, it could lead to stable and adequate plasma concentrations in a reasonable amount of time and potentially help prevent therapeutic failure.

Methodology: This single center, retrospective study included patients under the age of 18 who received at least one dose of voriconazole by mouth or intravenously, or posaconazole intravenously, accompanied by at least one serum concentration at least 5 days after initiation of treatment at Duke University Hospital between July 1, 2014 to July 1, 2019. Patients were excluded if they were over 18 years of age, had a baseline QTc greater than 500 seconds, or baseline liver function tests greater than five times the upper limit of normal prior to treatment, or if the patient was on posaconazole or voriconazole prior to admission or received a dose of posaconazole suspension or delayed release tablets prior to treatment with the intravenous formulation.

Demographic data, indication for antifungal medication, fungal infection location and fungal culture pathogens were collected using the Maestro Care Electronic Health Record. The posaconazole and voriconazole dosing, route, and serum trough concentrations were documented, along with the number of days between initiation of antifungal therapy and achievement of therapeutic trough concentration. Safety assessments, including liver function tests, QTc intervals, and concurrent medications that increase the risk of QTc prolongation, were included based on availability of information.

Results: In progress

Conclusions: In progress

Objective: Describe the empiric dosing regimens to achieve therapeutic serum trough concentrations for voriconazole and posaconazole in pediatric patients

Self Assessment Question: Name two factors that can influence serum trough concentrations of azole antifungals in pediatric patients

https://www.youtube.com/watch?v=yP5W0f2_Tu4&feature=youtu.be

9:15am – 9:30am B **17 - Analysis of a University Employee Biometric Screening and Wellness Program from 2013 to 2018** Room E

Presenters: Richard Blankenship

Analysis of a University Employee Biometric Screening and Wellness Program from 2014 to 2018
Blankenship RS, Gamston CE, Peden G, Lloyd KB
AUPH1 Auburn University Pharmacy Health Services
Background: Purpose: : To evaluate an employer-sponsored health screening program
Methodology: Employees of Auburn University are incentivized to complete an annual biometric screening in exchange for a reduction in health insurance premiums. Approximately 6,000 biometric screenings are performed through this program annually; 5,000 through the Auburn University Pharmaceutical Care Center (AUPCC) and approximately 1,000 by other healthcare providers. Total cholesterol, HDL, blood glucose, blood pressure, and body mass index (BMI) are measured at each screening. Patients are categorized according to risk as green zone, yellow zone, or red zone for normal, elevated, and high values, respectively. When screened through the AUPCC, participants receive personalized counseling on their results. Outside of the AUPCC, counseling is performed at the discretion of the administering provider. Descriptive statistics were used to illustrate program-level findings over 5 years. Changes in measured values and risk category for each clinical marker over time were evaluated using repeated measures ANOVA, Friedman test, and paired t-test, as appropriate.
Results: 923 (44%) of risk zones were improved (in a lower risk) in 2018, while 1053 zones moved from the low "green" zone to a higher risk zone. Of the patients who had potential to improve, 368 (68%) of Blood pressure, 225 (67%) of Glucose, 189 (55%) of Cholesterol, and 141 (16%) of BMI zones improved.
Conclusions: A significant number of those who could improve their risk zones did, but an equivalnt number of patients increased in risk zone. Future endevors should focus on keeping healthy patients health in addition to reducing risk.
Objective: To evaluate changes in clinical markers for participants in an employer-sponsored biometric screening program over 5 years
Self Assessment Question: What percentage of employees had improvement in their clinical markers during while participating in the screening program?

9:15am – 9:30am Y **20 - Assessing the Impact of a Pharmacist-Led Lipid Clinic in a Rural Southwest Virginia Community Pharmacy** Room H

Presenters: Jeremy Boltz

Assessing the Impact of a Pharmacist-Led Lipid Clinic in a Rural Southwest Virginia Community Pharmacy
Michael Justice & Travis Garrett
APCP1 Appalachian College of Pharmacy
Background: Dyslipidemia, a modifiable health condition, is increasing in prevalence throughout the United States. Current research indicates medication adherence, patient specific medication education, and general wellness education (diet, exercise, weight loss, smoking cessation), can lead to significant improvement. Community pharmacist are in a position to provided these services and improved patient's dyslipidemia management.
Methodology: Base line parameters such as sex, age, weight, height, medical history, medication, medication adherence history, and smoking status will be documented. These results will be recorded a second time, at the completion of the study. In order to participate patients must be at least 18 years of age and maintain no contraindications for entering the study. The study will follow participants for a twelve week duration. A pharmacist will complete a comprehensive medication review of each patient at baseline. Study participants will then receive education on dyslipidemia, individualized patient specific medication, medication adherence, diet, lifestyle changes, and, if applicable, smoking cessation. Participants will complete a satisfaction survey offered at base line, midpoint, and conclusion of the study. Follow-up appointments will be used to ensure patient medication adherence, give supplemental education, or answer any questions the participant may have. Individuals will be scheduled for weekly appointments including in person, telephone, and tele-video. Individuals will be scheduled for bi-weekly appointments including in person, telephone, and tele-video. At the end of 12 weeks the final data will be collected, and the results will be compared to baseline.

Results: In Progress
Conclusions: In Progress
Presentation Objective: With the information collected in this study, thus far. Does the average patient understand the importance of each of their medications.

Self Assessment Question: Does the use of an appointment based model for educating the patient on health education improve patient understanding of their health. To be determined, patient are verbally noting an increased health education and satisfaction. Information will be collected at the conclusion of the research.

https://www.youtube.com/watch?v=a8Fm3aikYdY

9:15am – 9:30am R **16 - Dexmedetomidine versus propofol as initial sedative agent for patients admitted to a medical intensive care unit at a community teaching hospital** Room D

Presenters: Stephanie Bills

Dexmedetomidine versus propofol as initial sedative agent for patients admitted to a medical intensive care unit at an academic medical center

Stephanie Bills, Lauren Chambers
VMCG1 Vidant Medical Center

Background: The current PADIS guidelines provide recommendations for an analgosedation approach with a focus on avoiding benzodiazepines (BZD) however do not state a preference for which non-BZD agent should be utilized. The purpose of this study was to determine if initial sedation with dexmedetomidine compared with propofol impacted the percentage of time patients were at their target sedation goal and impacts on overall ICU care.
Methodology: This single center retrospective review included adult patients admitted to the medical intensive care unit between February 2013 and September 2018 who received dexmedetomidine or propofol as initial monotherapy sedative for at least 12 hours. Patients were excluded if they required deeper sedation (RASS less than -2) or had another indication that would preferentially guide sedative agent selection. Endpoints collected included time spent at RASS goal, time to goal sedation, impact on mechanical ventilation, and estimated cost of sedation. The Chi-Square test was used to compare categorical data, while Mann-Whitney U and Student's T-test were used to compare continuous data.
Results: Our analysis demonstrated the percentage of RASS values at goal between propofol (n=115) and dexmedetomidine (n=81), were 50% and 31% respectively (p= 0.119). Baseline characteristics between groups were similar. Additionally, the two groups did not differ significantly in rates of under-sedation (propofol 18% vs. dexmedetomidine 11%; p= 0.802) or over-sedation (propofol 30% vs. dexmedetomidine 29%; p= 0.183).
Conclusions: We concluded that among patients undergoing mechanical ventilation in the ICU, choice of initial sedative when comparing propofol and dexmedetomidine, does not significantly impact the amount of time that patients achieve their goal sedation as defined by RASS target.

Objective: Identify differences between dexmedetomidine and propofol when used as initial sedative agent.
Self Assessment Question: How can pharmacists contribute to selection of the most appropriate sedative to reduce agitation in critically ill patients?

Video Link: https://youtu.be/uFIFV8k0PzU

9:15am – 9:30am R **19 - A Comparison of Antifactor Xa and Activated Partial Thrombin Time Monitoring as Part of Unfractionated Heparin Protocols** Room G

Presenters: Jasleen Bolina

A Comparison of Antifactor Xa and Activated Partial Thrombin Time Monitoring as Part of Unfractionated Heparin Protocols

Jasleen Bolina, Sabrina Croft, Joseph Crosby

SJCC2 St. Joseph's/Candler Health System (Critical Care)

Background: Antifactor Xa (anti-Xa) monitoring has been associated with fewer lab tests and a faster time to therapeutic response while on an unfractionated heparin (UFH) drip compared to activated partial thrombin time (aPTT) monitoring; however it is uncertain if patients stay within the therapeutic range to a greater extent when utilizing anti-Xa monitoring over aPTT monitoring. This study aims to compare target attainment, maintenance within therapeutic range, as well as other outcomes of UFH drip protocols monitored by anti-Xa to those monitored by aPTT.

Methodology: Patients were identified via orders for both the high and low-dose UFH drip protocols. Patients were divided into those monitored by aPTT or those by anti-Xa. Both groups were evaluated on time within therapeutic range, time to therapeutic goal, incidence of supratherapeutic or subtherapeutic levels, prevalence of Xa inhibitors prior to initiation, and incidence of bleeding or thromboembolism.

Results: Of the 132 patients evaluated, 66 were monitored via anti-Xa and 66 via aPTT levels. UFH drips monitored with anti-Xa levels remained within therapeutic range 60% of the time compared to 38% when monitored by aPTT levels (P=0.006).

Conclusions: When monitored by anti-Xa levels, UFH drips remained within therapeutic range to a greater extent than when monitored by aPTT levels.

Objective: Identify differences between antifactor Xa levels (anti-Xa) and activated partial thrombin time (aPTT) monitoring in patients on protocolized unfractionated heparin (UFH) drips

Self Assessment Question: What are some therapeutic advantages of anti-Xa level monitoring compared to aPTT monitoring for UFH drips?

Link to Presentation:https://www.youtube.com/watch?v=SuU_oVGH1Vs&feature=youtu.be

9:15am – 9:30am R **23 - Desmopressin administration and impact on hypertonic saline effectiveness in intracranial hemorrhage** Room K

Presenters: Emily Bowers

Desmopressin administration and impact on hypertonic saline effectiveness in intracranial hemorrhage

Emily Bowers, Eric Shaw, William Bromberg, Audrey Johnson

MHUM2 Memorial Health University Medical Center (Critical Care)

Background: Desmopressin improves hemostasis through the release of factor VIII, von Willebrand factor, tissue plasminogen activator, and increases platelet adhesion. Neurocritical Care guidelines recommend administration of desmopressin in intracranial hemorrhage. Studies supporting its use have not evaluated the potential impact of desmopressin on serum sodium levels and hypertonic saline effectiveness.

Methodology: This was a single-center, prospective, observational chart review. Patients were included in the desmopressin group if they were diagnosed with intracranial hemorrhage, administered desmopressin, and received hypertonic saline. Patients in the hypertonic saline group were matched 1:1 to patients in the desmopressin group. The primary endpoint was the effect of desmopressin on reaching goal sodium of 145 to 155 mEq/L. The secondary endpoints included ICU and hospital length of stay, change in sodium, time to reach goal sodium, thrombotic events, mortality, and a composite of increased cerebral edema, hematoma expansion, need for neurosurgical intervention, and neurologic decompensation.

Results: Of 112 patients screened, 25 patients met inclusion criteria for the desmopressin group and 25 patients were matched in the hypertonic saline alone group. The percentage of patients who reached goal sodium in the desmopressin group compared to hypertonic saline alone was similar (80% vs 88%). There were no differences in the secondary endpoints. In the subgroup analysis, patients in the hypertonic saline group met the pre-defined goal sodium of 150 to 155 mEq/L within 48 hours more often than the desmopressin group (82% vs 60%, p = 0.042).

Conclusions: The use of desmopressin in intracranial hemorrhage does not appear to negatively impact the ability for patients to reach goal sodium of 145 to 155 mEq/L. However, in patients with higher sodium goals, desmopressin may decrease hypertonic saline effectiveness.

Objective: Assess the impact of desmopressin administration on sodium in intracranial hemorrhage

Self Assessment Question: Does the use of desmopressin in intracranial hemorrhage prevent patients from reaching sodium goals?

9:15am – 9:30am | **14 - The impact of a pharmacist-driven Staphylococcus aureus bacteremia initiative in a community hospital** Room B

Presenters: Nate Berger

The impact of a pharmacist-driven Staphylococcus aureus bacteremia initiative in a community hospital

Nate Berger, Michael Wright, Jonathon Pouliot, Deborah Armstrong
WSMC1 Williamson Medical Center

Background: Staphylococcus aureus is a leading cause of bacteremia with one-year mortality of 44.6%. The purpose of this study is to evaluate outcomes after implementation of a pharmacist-driven Staphylococcus aureus bacteremia (SAB) initiative in a community hospital.

Methodology: This study is a retrospective cohort analysis with a historical control. A pharmacist-driven SAB initiative was implemented in April 2015. Patients admitted with SAB between May 2015-April 2018 (intervention group) were compared to those admitted between May 2012-April 2015 (historical control group). Pharmacists were notified of and responded to blood cultures positive for Staphylococcus aureus by contacting provider(s) with a bundle of recommendations. Components of the SAB bundle included prompt source control, selection of appropriate intravenous antibiotics, appropriate duration of therapy, repeat blood cultures, echocardiography, and infectious diseases consult. Demographics (age, gender, and race) were collected at baseline. Primary outcome measures were in-hospital mortality and overall compliance with all bundle components.

Results: Eighty-three patients in the control group and 110 patients in the intervention group were included in this IRB-approved study. Demographics were similar at baseline. In-hospital mortality was lower in the intervention group (3.6% vs 15.7%; p=0.0033). Bundle compliance was greater in the intervention group (69.1% vs 39.8%; p<0.0001).

Conclusions: We observed a significant reduction in in-hospital mortality and increased treatment bundle compliance in the intervention cohort with implementation of a pharmacist-driven SAB initiative in a community hospital. Pharmacists' participation in the care of SAB patients in the form of recommending adherence to treatment bundle components drastically improved clinical outcomes. Widespread adoption and implementation of similar practice models at other institutions may reduce in-hospital mortality for this relatively common and life-threatening infection.

Objective: List evidence-based recommendations for the management and treatment of Staphylococcus aureus bacteremia.

Self Assessment Question: What are the recommended intravenous antibiotics and duration of treatment for MSSA and MRSA infections?

https://www.youtube.com/watch?v=Mlvg4UAYrV4

9:15am – 9:30am I **15 - Methicillin-Resistant Staphylococcus aureus Polymerase Chain Reaction Nasal Swab to Guide Antibiotic Therapy for Pneumonia in an Intensive Care Unit** Room C

Presenters: Matthew Berry

Methicillin-Resistant Staphylococcus aureus Polymerase Chain Reaction Nasal Swab to Guide Antibiotic Therapy for Pneumonia in an Intensive Care Unit
Matthew Berry, Amanda Guffey, Benjamin Britt

Background: To assess the impact of methicillin-resistant *Staphylococcus aureus* (MRSA) polymerase chain reaction (PCR) nasal swab implementation on vancomycin duration of therapy in the medical intensive care unit (MICU).
Methodology: This pre- and post-intervention chart review was conducted to assess vancomycin utilization among MICU patients with suspected pneumonia, who received a MRSA PCR nasal swab. Negative MRSA PCR results were used to guide de-escalation of vancomycin therapy. The primary outcome of this study was the effect on vancomycin duration of therapy. Secondary outcomes included mortality, rate of vancomycin-associated acute kidney injury (AKI), and total number of vancomycin concentration levels.
Results: At the conclusion of the review, a total of 304 patient records were included. After exclusions were applied, 134 patients met inclusion into the review. Baseline demographics and clinical characteristics were similar in the pre- and post-intervention groups. For the primary outcome, MRSA PCR nasal swab implementation reduced the mean duration of vancomycin therapy by 0.8 days (3.4 days vs. 2.6 days; p = 0.002). With regards to secondary outcomes, there was 35% decrease in vancomycin serum concentration level obtainment (81 vs. 53; p=0.04). There were no significant differences detected in mortality, hospital length of stay (LOS), MICU LOS, or rates of vancomycin-associated AKI.
Conclusions: This retrospective chart review pre- and post-intervention found that MRSA PCR nasal swab implementation resulted in a significant reduction in vancomycin duration of therapy without negatively affecting clinical outcomes. These findings serve to support the growing body of evidence of MRSA PCR nasal swab screening to promote early de-escalation of empiric vancomycin in patients with pneumonia.
Objective: Describe the impact of MRSA PCR nasal swab implementation on vancomycin therapy in patients with pneumonia admitted to the MICU.
Self Assessment Question: What was the effect of MRSA PCR nasal swab implementation on vancomycin duration of therapy?
https://lexmed.wistia.com/medias/b0daa49t8d

9:15am – 9:30am L **22 - Evaluation of the efficacy and safety of Glucommander in a community hospital setting** Room J

Presenters: Mary Grace Bouldin

Evaluation of the efficacy and safety of Glucommander in a community hospital setting
MG Bouldin, B Hong, T Setji, J Greenlee, A Cooper, J Thompson, K Capes
DRHC1 Duke Regional Hospital
Background: Glucommander is a computer-based, nurse-driven algorithm for the management of intravenous (IV) and subcutaneous (SQ) insulin therapy for hospitalized patients. The purpose of this study is to evaluate the efficacy and safety of Glucommander compared to previously-utilized nomograms in the community hospital setting.
Methodology: This study is a retrospective, single-center cohort study comparing measures of efficacy and safety of IV and SQ insulin therapy via Glucommander versus nomogram-driven IV insulin therapy followed by provider-ordered basal-bolus SQ insulin. The primary efficacy endpoint is percent of blood glucose readings per patient in target glycemic range. Safety objectives to be assessed are as follows: percent of hyperglycemic events after achieving target blood glucose range and percent of patients with hyperglycemic events after reaching euglycemia; percent of hypoglycemic events and percent of patients with hypoglycemic events; percent of severe hypoglycemic events and percent of patients with severe hypoglycemic events.
Results: In Progress
Conclusions: In Progress
Objective: Describe the differences in efficacy and safety of two inpatient insulin management processes.
Self Assessment Question: Which groups of patients might be more likely to experience hypoglycemic events with Glucommander?

9:15am – 9:30am P **21 - Impact of System Level Opioid Stewardship Committee Initiatives on Opioid Prescribing in a Community Hospital** Room I

Presenters: Megan Boudouin

Impact of System Level Opioid Stewardship Committee Initiatives on Opioid Prescribing in a Community Hospital
Megan Boudouin, Hyeseung Kang, Duy Vu
PCOM1 Philadelphia College of Osteopathic Medicine School of Pharmacy/Wellstar North Fulton Hospital

Background: Improving opioid prescribing practices has become a major healthcare priority due to the marked increase of opioid misuse. Important indicators to assess the quality and safety of opioid prescribing include tracking the number of patients on opioid therapy who have a documented sedation assessment using a validated scale such as the Pasero Opioid Sedation Scale (POSS), the proportion of hospitalized patients on IV opioid medication for more than three days and the proportion of patients who receive concurrent stimulant laxatives. Wellstar North Fulton established an Opioid Stewardship Committee in April 2018 to monitor and improve opioid prescribing patterns. Interventions from the initiative require pharmacists to perform profile reviews to recommend prophylactic bowel regimens, reduction in high dose opioid therapy when needed and recommend the use of oral opioid therapy in patients tolerating medications by mouth.

The aim of this study is to evaluate the effectiveness of the interventions in reducing the number of days of IV opioid therapy and increasing the number of patients who receive an opioid-induced constipation prophylaxis laxative regimen. The secondary objective includes assessing the proportion of hospitalized patients on opioids who received naloxone administration and evaluate the compliance of POSS documentation.

Methodology: Retrospective chart review of two groups before and after the opioid stewardship committee's inception. The pharmacist interventions will be evaluated by analyzing the average duration of IV pain medication and the proportion of patients on opioid therapy who receive stimulant laxative administration. The impact of the committee's prescriber and nursing educational efforts will be evaluated by assessing the naloxone administration rate and POSS documentation compliance.

Results: There was a significant decrease in the number of days on IV opioids (3.1 days vs 1.9 days, p=0.006). There was no significant difference in the number of patients recieving a concurrent bowel regimen with opioid therapy (49% vs 59%, p=0.25), there was a decrease in naloxone administrations (7 vs 3), 57% of study patients had POSS documentation

Conclusions: There was a significant decrease in the number of days on IV opioid therapy between group 1 and group 2, About 60% of the study patients in group 2 received an appropriate bowel regimen and we observed a decrease in the number of naloxone administrations in group 2.

Objective: List important indicators to assess the quality and safety of opioid prescribing.

Self Assessment Question: What is one potential intervention pharmacists can make to ensure safe and effective opioid prescribing?

Link to presentation: https://www.youtube.com/watch?v=r2jwNacJqsw

9:15am – 9:30am D **24 - Evaluation of pediatric asthma exacerbations following the integration of a clinical pharmacist into the ambulatory care setting** Room L

Presenters: Taylor Bowick

Evaluation of pediatric asthma exacerbations following the integration of a clinical pharmacist into the ambulatory care setting

Taylor C. Bowick, Stacey Risk, Courtney Meade, Kelley R. Norris
AUMP2 Augusta University Medical Center/University of Georgia College of Pharmacy (Pediatrics)

Objective: Identify current gaps in the outpatient management of children with asthma and potential areas of opportunity for pharmacist impact in overall care.

Self Assessment Question: How may clinic-embedded pharmacy presence affect pediatric asthma exacerbations?

Background: The population health management model emphasizes the integration of a multidisciplinary team to focus on prevention, high-risk patients, and chronic disease management within a patient-centered medical home. In September 2018, the pediatric ambulatory care team incorporated a pharmacist to assist with asthma management. There are no clinical studies evaluating the impact of a pediatric ambulatory care pharmacist on asthma education, management, and outcomes. The objective of this study was to determine the impact of pharmacist integration in a pediatric ambulatory care team to aid in the acute treatment, follow-up, and ongoing management of pediatric asthma patients.

Methodology: A single-center, retrospective chart review was conducted to assess pharmacist effect from January 1, 2018 to August 31, 2019. Eligible patients included patients up to 18 years of age with a diagnosis of asthma or reactive airway disease, who received routine primary care during the target time frames. The primary outcome assessed the impact on acute asthma exacerbations, defined by an emergency department (ED) visit, receipt of corticosteroids, and/or hospitalization among patients pre- and post-pharmacist integration. Secondary outcomes included examining differences in access to direct patient care, medication adherence, educational tools received, and no-show appointment rates.

Results: One-hundred and forty-three patients were eligible for inclusion. ED visits and corticosteroid use decreased significantly from pre- to post-pharmacist integration. There were not enough hospitalizations applicable for model analysis. Primary care provider visits increased significantly, and no-show appointment rates decreased significantly from pre- to post-pharmacist integration.

Conclusion: Pharmacists can help bridge gaps in asthma management through frequent assessment of medication utilization and patient education as a result of increased access to healthcare.

Youtube link: https://youtu.be/iLDbius_b9k

9:15am – 9:30am T **13 - Impact of Inpatient Pharmacy-Driven Transitions of Care Services on Clinical Outcomes**

Presenters: Megan Bereda Room A

Impact of Inpatient Pharmacy-Driven Transitions of Care Services on Clinical Outcomes

Megan Bereda, Carrie Tilton, Jessica Nave, Heidi King, Nicole Metzger
EUIM2 Emory University Hospital/Mercer University College of Pharmacy (Internal Medicine)

Background: Medication errors occur during transitions of care (TOC), and health systems are trying to improve medication access by reducing barriers such as high out-of-pocket costs or the need for a prior authorization. Pharmacists understand the pharmacologic treatment options for a disease, the alternatives, and have experience communicating with pharmacy benefits managers, which makes them the ideal healthcare provider to improve medication access. The study evaluates the impact of medication access interventions prior to discharge by pharmacy personnel and measures physicians' perceptions of pharmacist-provided TOC services, self-reported burnout, and job satisfaction.

Methodology: This is a retrospective cohort study of adult patients admitted to Emory University Hospital from January 1, 2014 to August 30, 2019. Case patients received a TOC medication access intervention by a pharmacist, whereas control patients were propensity matched to cases and did not receive any pharmacist intervention. Data was gathered from the Data Warehouse and the electronic medical record. Clinical outcomes include hospital length of stay and 7-day and 30-day readmissions. A two-part survey was sent to Emory hospitalists to evaluate their perceptions of pharmacy-provided TOC services, burnout, and job satisfaction using the Professional Fulfillment Index. Endpoints will be compared between the cases and the controls using two sample t-test or Chi-square for continuous and nominal data, respectively. Multivariable analysis using a general linear model will be used to estimate the adjusted difference.

Results: There was no statisically significant difference in primary or secondary outcomes. Of the 75 case patients, 18 required prior authorizations and our pharmacy team had a 94% approval rate. Our survey had a 72% (26/36 hospital medicine physicians) completion rate and showed that majority of physicians agreed that they valued pharmacy personnel assistance with TOC services and that pharmacy involvement decreased work burden. Over 50% of physicians agreed that to some extent, they felt physically and mentally exhausted at work and felt a sense of dread when thikning of the work they had to do.

Conclusions: There was no significant difference in length of stay or readmission rates for the pharmacy-involved patients. However, there was a positive response by the physicians in that pharmacy assistance with TOC tasks may reduce physician reported burnout.

Objective: Assess the impact of inpatient pharmacist-driven transitions of care services on clinical outcomes and physician satisfaction

Self Assessment Question: What was the impact of pharmacist-driven transitions of care services on hospital length of stay and physician satisfaction?

Link to presentation: https://youtu.be/cU0ujkON614

9:30am – 9:45am A **26 - Implementation of a selective autoverification list in a large academic medical center adult emergency department** Room B

Presenters: Joseph Bredeck

Implementation of a selective autoverification list in a large academic medical center adult emergency department

J Bredeck, K Lirette, M Hollinger, L Almassalkhi, R Pippin, K Mieure

WFB12 Wake Forest Baptist Health (Administration and Leadership with Masters)

Background: Emergency departments (EDs) are unique health care settings that provide a variety of healthcare services, ranging from primary to critical care. EDs have characteristics prone to creating errors, such as fast-paced environment, pressure situations, overcrowded, and subject to interruptions. EDs benefit from pharmacy services through a variety of direct patient care activities.

Wake Forest Baptist Medical Center (WFBMC) is a Level I adult and pediatric trauma center and comprehensive stroke center with a 24/7 ED satellite pharmacy that sees ~156,000 ED visits annually. Emergency Medicine (EM) pharmacists currently conduct 100% prospective order review for WFBMC and two community hospitals in the health-system during select hours. Perceptions are that 100% prospective order review, in the setting of finite resources, limits the amount of time EM pharmacists are available to conduct direct patient care (DPC) activities.

Methodology: In order to conduct this single center, quality improvement implementation study, a multidisciplinary subject matter expert group was formed to review all medication orders verified in the WFBMC adult ED over one year. The group determined the safety profiles of the medication orders and their appropriateness for consideration of autoverification. A list of medication orders acceptable for autoverification was developed. The selective autoverification list was brought to a multidisciplinary ED operations committee for approval prior to implementation. The primary objective of this study is to compare the time EM pharmacists conduct DPC activities before and after implementation of a selective autoverification list. Secondary objectives include assessment of types of DPC activities performed, change in number of medication-related adverse events and time to order verification.

Results: In progress

Conclusions: In progress

Objective: To describe the methods used in the implementation and evaluation of a selective autoverification list in an adult emergency department at a large academic medical center.

Self Assessment Question: How does the implementation of a selective autoverification list advance pharmacy practice in the ED?

Presentation Link: https://youtu.be/_jBi0Rnc4J0

9:30am – 9:45am B **33 - IMPACT OF PHARMACIST LED EDUCATION ON MEDICAL RESIDENT KNOWLEDGE OF DIABETES MELLITUS MANAGEMENT** Room I

Presenters: Abigayle Campbell

IMPACT OF PHARMACIST LED EDUCATION ON MEDICAL RESIDENT KNOWLEDGE OF DIABETES MELLITUS MANAGEMENT

Abigayle Campbell, Jessica Odom, Casey Penland, Meenu Jindal, Alex Ewing
GHSG1 Greenville Health System

Background: The management of diabetes mellitus (DM), is often complex and extensive. There is scarce literature available as to if pharmacists can improve the knowledge of diabetes management in medical residents. The objective of this study is to evaluate if pharmacist led education on diabetes mellitus treatment will improve medical resident's knowledge in diabetes mellitus therapy management.

Methodology: A single-center, prospective, pre-post design study was conducted on medical resident's knowledge of diabetes mellitus. Only Prisma Health-Upstate internal medicine residents were included. During a rotation within the clinic, the medical resident received informal education, which included a team based approach to diabetes management alongside a pharmacist. Residents also received formal education, which took place in the form of PharmD led in-services once weekly, over a four week span, on the topics of: insulin management, non-insulin agents, concentrated insulins, and diabetes technology. The primary outcome of this study is the percentage change in post assessment score from baseline assessment score. The secondary outcomes are percentage change in confidence score from baseline and usage of appropriate medications based on concomitant disease states.

Results: A total of 12 participants completed the pre assessment and 6 completed the post assessment. The change in pre/post assessment score for participants was +18.5% (0-40%). The change in pre/post confidence score was +25.3% (0.3-50%). Twenty-three patients seen within the clinic were included in the retrospective review with less than 1/2 on appropriate 2019 ADA directed therapies base on concomitant disease states.

Conclusions: Pharmacists can serve as educators for medical residents both formally and informally. Medical resident confidence in diabetes management can potentially be improved with the use of pharmacist instruction.

Objective: To define the role of pharmacists as educators on medical resident's knowledge of diabetes mellitus.

Self Assessment Question: Which of the following is/are techniques that pharmacists can utilize to provide education to medical residents?

Presentation Link:

https://youtu.be/UWGMyKrbbp4

9:30am – 9:45am B **35 - IMPACT OF PHARMACIST MANAGEMENT OF LIPID-LOWERING THERAPY IN SPECIALTY CLINIC** Room K

Presenters: Brittney Champagne

Impact of pharmacist management of lipid-lowering therapy in a specialty clinic

Brittney Champagne, Deanna Rattray, Maryann Choy-Ames
NHFM1 Novant Health Forsyth Medical Center

Presentation URL: https://youtu.be/gLZCS5aEy4E

Background: Results of several studies evaluating intervention programs indicate that pharmacists can play a key role in improving cholesterol management. In 2018, Novant Health Heart and Vascular Institute developed a pharmacist managed lipid clinic aimed to provide optimal lipid-lowering therapy and improved medication access for patients. The purpose of this study was to identify the impact of pharmacist management of lipid-lowering therapy in this specialty clinic.

Methodology: This study is a retrospective analysis comparing all patients seen by the clinical pharmacists for lipid-lowering therapy management in the lipid clinic from January 2018 to December 2019. Patients were referred to the clinic by their primary care provider or cardiologist. Patients were excluded if they were non-adherent to appointments or laboratory follow-ups. The primary objectives were to measure the percent decrease in LDL/non-HDL for all patients managed by the clinical pharmacists and to evaluate LDL/nonHDL reduction for patients receiving proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors managed by the clinical pharmacists compared to those managed by their primary care provider or cardiologist. Secondary objectives included revenue generated from lipid service management, quantity and type of clinical pharmacist interventions, and percentage of patients meeting individual LDL/nonHDL goals.

Results: A total of 195 lipid clinic patients were included in the study. At the time of initial visit, the average LDL was 56 mg/dL and non-HDL was 190 mg/dL. After pharmacist management the average LDL reduction was 55% and non-HDL reduction was 46%. Seventy percent of lipid clinic patients met their individual LDL and non-HDL goals. The clinical pharmacists initiated 230 lipid-lowering therapies, including 119 PCSK9 inhibitors. There was no significant difference in LDL/non-HDL reductions for patients receiving PCSK9 inhibitors managed by the clinical pharmacists in the lipid clinic (63%, 54%) and patients receiving PCSK9 inhibitors managed by their primary care provider or cardiologist (61%, 52%, P=0.544). Between the 195 initial patient visits, the lipid clinic received $18,460 in reimbursements.

Conclusion: Patients referred to the clinical pharmacist for lipid-lowering therapy achieved significant reductions in LDL and non-HDL, supporting a continued role for pharmacy care management in specialty clinics.

Objective: Identify the benefits of a pharmacist managing lipid-lowering therapies in a specialty clinic.

Self Assessment Question: What is one potential benefit for having pharmacists manage lipid-lowering therapies in specialty clinics?

9:30am – 9:45am R **32 - Response to positive urine, wound, stool, and sexually transmitted disease cultures in patients discharged from the emergency department** Room H

Presenters: Britany Byrkit

Response to positive urine, wound, stool, and sexually transmitted disease results in patients discharged from the emergency department

Britany Byrkit, Ginger Gamble, Nichole Allen
VMCG1 Vidant Medical Center

Background: Antimicrobial resistance is a known threat to public health and is responsible for an estimated 2.8 million illnesses and 36,000 deaths each year in the United States alone. Currently, there is a national goal to combat antimicrobial resistance by reducing inappropriate outpatient antibiotic use by 50% by 2020, and the Emergency Department (ED) is classified as an outpatient setting. In 2017, the CDC reported that up to 50% of the 13.6 million prescriptions for antibiotics written in the ED were prescribed inappropriately and 30% were not even necessary. The purpose of this study was to evaluate the current practice of positive culture review and antimicrobial prescribing for patients discharged from the ED.

Methods: This retrospective chart review conducted at Vidant Medical Center evaluated 206 adult patients discharged from the ED with subsequent positive urine, stool, wound or sexually transmitted disease (STD) test results between July 2018 and July 2019. The primary endpoint was the percentage of patients that received appropriate antimicrobial therapy after their culture resulted. Appropriateness was evaluated based on local antimicrobial stewardship policy and national Infectious Disease Society of America (IDSA) guidelines. Factors considered include the choice of antibiotic, dose, frequency, and duration, as well as patient-specific factors, such as allergies, renal function, and comorbidities.

Results: A total of 1,020 patients were identified, 206 were included for analysis. Overall, 34% of patients had appropriate empiric and follow-up antibiotic therapy. Prescription of antibiotics for asymptomatic bacteriuria and inappropriate duration of therapy were the most common prescribing errors in both empiric and post-culture review prescribing practices.

Conclusions: Pharmacists can work with ED physicians to reduce empiric and follow-up prescriptions for asymptomatic bacteriuria.

Presentation Objective: Identify aspects of an ED culture response process that could benefit from pharmacist involvement.

Self-Assessment: What is a disease state that pharmacists can target to improve culture follow up in the emergency department?

Presentation Link: https://youtu.be/IvUXd42QtZc

9:30am – 9:45am | **27 - Validation of a Population-Based Vancomycin Nomogram in Achieving Steady-State Trough Concentrations** Room C

Presenters: Stephanie Brennan

Validation of a Population-Based Vancomycin Nomogram in Achieving Goal Steady-State Trough Concentrations
Stephanie Brennan
St. Vincent's Hospital
Birmingham, Alabama
Background/Purpose: Variability still exists in both evidence and clinical practice as it relates to optimum initial dosing strategies for vancomycin. The objective of this study is to analyze the current vancomycin dosing nomogram in achieving goal steady state trough concentrations.
Methodology: Eligible participants included patients 18 years of age or older who were admitted to the hospital and initiated on vancomycin with a corresponding pharmacy consult for dosing and management. Patients were excluded from the study if maintenance regimens were not based on nomogram guidance, if regimens were discontinued prior to obtaining a steady state trough, or if patients fell outside nomogram dosing. Parameters evaluated include severity of disease and corresponding trough goals as well as the appropriateness of trough timing. Goal trough concentrations follow consensus guideline recommendations, targeting a trough of 15-20 mcg/mL for complicated infections and 10-15 mcg/mL for mild to moderate infections.
Results: In progress
Conclusion: In progress
Presentation Objective: Identify the advantages and disadvantages of nomogram-based vancomycin dosing in achieving target steady-state trough concentrations.
Self-Assessment Question: What variables could impede achieving therapeutic trough levels?

9:30am – 9:45am | **34 - Evaluation of vancomycin use in hospitalized patients presenting with sepsis of unknown origin** Room J

Presenters: Ryan Case

Evaluation of vancomycin use in hospitalized patients presenting with sepsis of unknown origin
Ryan Case, J. Andrew Carr, Todd McCarty
BVAM1 Brimingham VA Medical Center
Background: The focus of this study is to assess the use of vancomycin in patients with sepsis of unknown origin.
Methodology: This research project used retrospective chart review of electronic medical records to select patients that received vancomycin in a single institutional setting for year 2018. Pooled data consisting of patients that received a pharmacy pharmacokinetic consult for dosing of vancomycin was used initially to eliminate patients that may have only received one dose. Retrospective review of electronic medical records was used to collect variables including age, sex, indication, duration of therapy, available culture data, antibiotic treatment history within the past month, and final diagnosis. Specifically, patients that presented with sepsis of unknown origin as initial indication were included. For purposes of this study, patients with a suspected cause of sepsis for initial indication were excluded. If final diagnosis was unclear, indication provided by the consulting physician for vancomycin pharmacokinetic dosing was used.
Results: In progress
Conclusions: In progress
Objective: List potential improvements to antimicrobial stewardship within a hospital.
Self Assessment Question: What areas within a hospital can a pharmacist improve antimicrobial stewardship?

9:30am – 9:45am L **25 - ASSESSMENT OF CURRENT PRACTICES: PROTON-PUMP INHIBITOR DEPRESCRIBING**

Presenters: Chad Bowman Room A

ASSESSMENT OF CURRENT PRACTICES: PROTON-PUMP INHIBITOR DEPRESCRIBING

Chad Bowman
SVHS1 St. Vincent's Hospital

Background: Current literature suggests the overprescribing of acid suppressive therapy in the inpatient population can often lead to unnecessary prescribing of outpatient medications. The purpose of this study is to analyze proton pump inhibitor (PPI) prescribing habits at St. Vincent's Hospital-Birmingham and assess if orders align with current guidelines and criteria for use.

Methodology: In this retrospective chart review, electronic medical records will identify eligible adult inpatients prescribed pantoprazole while admitted. The following data will be collected: dose, interval, route, powerplan used, ordering physician, days of therapy, appropriateness per hospital's criteria for use, prior outpatient prescription, duplicate therapy with histamine-2 receptor antagonist (H2RA), if patient was de-escalated, PPI prescribed at discharge, GI consultation, and C.diff development at 30 days. This project will examine the potential differences in prescribing habits and assess how future interventions can be made to discourage inappropriate prescribing of these agents.
Results: In Progress
Conclusions: In Progress
Objective: List potential interventions for inappropriate prescribing of proton pump inhibitors.
Self Assessment Question: All of the following are potential interventions pharmacists could make to discourage unnecessary prescribing of acid suppression therapy except for?

9:30am – 9:45am O **28 - Outcomes following reinduction therapy for relapsed acute myeloid leukemia post allogeneic hematopoietic cell transplantation** Room D

Presenters: Brooke Brown

Outcomes following reinduction therapy for relapsed acute myeloid leukemia post allogeneic stem cell transplantation

Brooke Brown, Maho Hibino, Rebecca Hunt, Brandi Anders, LeAnne Kennedy
WFBH1 Wake Forest Baptist Health

Background: Acute myeloid leukemia (AML) is a heterogeneous hematologic malignancy that is characterized by a defect in myeloid precursor cells that leads to unregulated proliferation of malignant myeloid cells in the bone marrow, blood, and other extramedullary sites. Allogeneic stem cell transplantation (alloSCT) is the only curative therapy for AML; however, relapse occurs in 40-70% of transplant recipients and is associated with a poor prognosis. The optimal treatment for relapsed AML following alloSCT is not well defined. While institutional practices differ, relapsed AML patients are often treated with reinduction chemotherapy with or without donor lymphocyte infusions. While WFBH relapse rates are similar to national averages, study investigators hypothesize that WFBH has improved survival outcomes based on the use of intensive reinduction therapies.
Methodology: This is an observational, single-center, retrospective chart review assessing patients who received an alloSCT for AML January 1, 2015 through December 31, 2017. Patients were excluded if they received a haploidentical transplant, received an investigational chemotherapy agent for treatment of AML, or were pregnant. The primary outcome of this study is 1-year OS following alloSCT and subsequent relapse. Secondary outcomes include 2-year OS post alloSCT, time from transplant to relapse, and time from transplant to last evaluation, lost to follow up, or death. WFBH outcomes will be compared to national data based on information obtained from the Center for International Blood and Marrow Transplant Research.
Results: Primary endpoint: 1-year OS in relapsed patients: 62.5%. Secondary endpoints: 2-year OS: 58%; time from transplant to relapse: 5.5 months; time from transplant to last evaluation, lost to follow up, or death: 26.8 months.
Conclusions: In our study, 31.4% relapsed following their alloSCT and the median time to relapse was 5.5 months. One-year overall survival for our 16 relapsed patients was 62.5%.
Objective: Discuss the OS of AML patients who relapse following alloSCT
Self Assessment Question: Does WFBH have improved OS rates for relapsed AML following alloSCT compared to previous studies?

Link to video presentation: https://youtu.be/-JELVNLOH5k

9:30am – 9:45am

O **29 - Determining the safety and efficacy of 7-7 versus 14-7 schedules of capecitabine in metastatic colorectal cancer (mCRC): a retrospective review** Room E

Presenters: Evan Bryson

Determining the safety and efficacy of 7-7 versus 14-7 schedules of capecitabine in metastatic colorectal cancer (mCRC): a retrospective review

Evan Bryson, Marley Watson, Kevin Hall, Amber Draper, Christine Davis

EUHO2 Emory University Hospital Midtown (Oncology)

Background: In an effort to improve tolerability, an alternative every-other-week dosing schedule of capecitabine is often administered for maintenance treatment of mCRC. The purpose of this study was to determine the safety and efficacy of administering 7-7 capecitabine +/- EGFR/VEGF inhibitors compared to the standard 14-7 dosing schedule.

Methodology: The study was an IRB approved, retrospective chart review of adult patients with histologically confirmed mCRC receiving capecitabine +/- EGFR/VEGF inhibitors in either a 7-7 or 14-7 schedule. The primary objective was to determine the tolerability of 7-7 dosing compared to 14-7 dosing, as defined by frequency of dose reductions and treatment delays. Secondary objectives included determining if ORR, PFS, OS and safety were comparable to 14-7 dosing.

Results: Of the 175 included patients, 73 (41.7%) received the capecitabine 7-7 schedule and 102 (58.3%) received the 14-7 schedule. For the primary endpoint, univariate analysis showed that the incidence of both dose reductions (4% vs 29%, $p<0.001$) and treatment delays (22% vs 43%, $p=0.004$) were significantly different between the 7-7 and 14-7 groups, respectively. No significant difference was found between the groups with regard to PFS, ORR or OS. However, the incidence of any adverse effects (45% vs 72%, $p<0.001$) and palmar-plantar erythrodysesthesia (PPE) (18% vs 45%, $p<0.001$) were significantly different between the 7-7 and 14-7 groups, respectively.

Conclusions: Patients with mCRC who received the 7-7 schedule had significantly fewer dose reductions and treatment delays compared to the 14-7 schedule, with associated decreases in the incidence of any adverse effects and PPE. Although no difference in efficacy outcomes were observed, prospective studies are needed to confirm these findings.

Objective: Describe the safety and efficacy of 7-7 dosing schedule of capecitabine compared to the 14-7 schedule in mCRC.

Self Assessment Question: List the potential benefits of using the 7-7 schedule of capecitabine in mCRC, compared to the 14-7 schedule.

9:30am – 9:45am O **31 - Cost avoidance associated with pharmacist-managed dose rounding of biologic and cytotoxic agents at a community outpatient oncology center** Room G

Presenters: Ashley Burt

Cost avoidance associated with pharmacist-managed dose rounding of biologic and cytotoxic agents at a community outpatient oncology center

Ashley Burt, April Workman, Kaylee Bruner, Andrea Jarzyniecki

JAMH1 John D. Archbold Memorial Hospital

Background: The purpose of this study was to determine potential annual cost containment with rounding of selected anticancer agents at a community outpatient oncology center.

Methodology: This study was a single-center, retrospective chart review of adult patients at a community outpatient oncology center who were prescribed at least one dose of a selected parenteral anticancer agent between March 1, 2019 and September 1, 2019. Data collected from the electronic medical record included: height, weight, medication order, prescriber, administered dose, and indication. Included drugs were based upon cost and high usage. Cost avoidance analysis was conducted on all doses that would achieve complete vial usage when rounded within 5 or 10 percent of the ordered dose. Cost was represented for each drug as dollar per mg and was based upon the average cost per product unit during the specified time frame. Multi-dose vials and medications with fixed dosing were excluded from review. Descriptive statistics were used to summarize data.

Results: A total of 818 doses of biologic and cytotoxic agents, comprising of 143 unique patients, were evaluated. Approximately forty-nine percent (n=407) of doses were eligible to be rounded to the nearest vial size. The estimated annual cost avoidance of agents included in review was approximately $175,660. Rituximab, carfilzomib, and bevacizumab composed approximately 46 percent of total cost avoidance and 32 percent of doses evaluated (n=262).

Conclusions: Dose rounding is an effective cost containment strategy for a community outpatient oncology center. It is also a viable mechanism for reducing medical waste by using whole vial sizes.

Objective: Demonstrate cost containment and waste reduction strategies that are possible with dose rounding of anticancer agents.

Self Assessment Question: What three drugs comprised approximately half of cost avoidance?

9:30am – 9:45am D **36 - Effectiveness of an antibiotic treatment protocol in the management of community acquired pneumonia in patients at an academic pediatric hospital** Room L

Presenters: Arielle Charles

Effectiveness of an antibiotic treatment protocol in the management of community acquired pneumonia in patients at an academic pediatric hospital

Arielle Charles; Andrea Gerwin; Renee Hughes; Janara Huff

EHSC1 Erlanger Health Systems

Background: Ampicillin/amoxicillin or penicillin G is recommended by the Pediatric Infectious Disease Society and Infectious Disease Society of America guidelines for fully immunized, otherwise healthy infants and school-aged children with a diagnosis of community acquired pneumonia (CAP). Despite this recommendation, many otherwise healthy patients who are fully immunized are given alternative antibiotics upon presentation at the hospital for CAP. Evidence shows utilizing a protocol increases adherence to guideline recommended treatment. The objective of this study is to evaluate the antibiotic selection for pediatric CAP patients after implementation of a guideline-driven treatment protocol at an academic pediatric hospital.

Methodology: This is a retrospective, Institutional Review Board approved study at an academic pediatric hospital. Patients receiving antibiotic therapy for suspected CAP from October 2018 to February 2019 and from October 2019 to February 2020 were included for evaluation. A CAP antibiotic treatment protocol was implemented between these two study periods. Patients were excluded if they had any of the following: immunodeficiency, increased risk of aspiration pneumonia, cancer, known lung disease, prior or current tracheostomy, and/or lung abscess/empyema. The principle outcome is to compare compliance with guideline recommendations for antibiotic therapy in pediatric patients with suspected CAP pre- and post- protocol implementation. Secondary outcomes include assessing utilization of diagnostic tools such as imaging, quantity of penicillin allergies, dosing, and total duration of therapy.

Results: In Progress

Conclusions: In Progress

Objective: Discuss antibiotic selection patterns for CAP patients in a single academic pediatric hospital and identify appropriate antibiotic therapy based on immunization status.

Self Assessment Question: What antibiotic is indicated for suspected CAP in fully immunized pediatric patients?

Presentation: https://youtu.be/Cd53l6ou6qA

9:30am – 9:45am 1 **30 - Efficacy of alemtuzumab in the treatment of chronic lung allograft dysfunction (CLAD) in lung transplant recipients** Room F

Presenters: Sarah Burnette

Efficacy of alemtuzumab in the treatment of chronic lung allograft dysfunction (CLAD) in lung transplant recipients

S. Burnette, A. Hulbert, K. Beermann, H. Berry, H.J. Lee, and L. Zaffiri

DUHD1 Duke University Hospital

Background: CLAD is a major cause of late graft failure after lung transplantation. The exact mechanism of CLAD progression is not well established, but treatment typically consists of T-cell targeted therapy with steroids, anti-thymocyte globulin, or alemtuzumab. At Duke University Hospital, alemtuzumab is often used given the extended effect on T-cells. Optimal timing of alemtuzumab administration to prevent CLAD progression has not been determined, but it is believed that efficacy may be limited in further advanced CLAD if irreversible allograft damage has occurred. In the interest of establishing the optimal time for alemtuzumab administration, we assessed the incidence of all-cause mortality or re-transplantation after alemtuzumab based on CLAD stage at time of administration. We further assessed this outcome in patients classified by CLAD phenotype. We investigated changes in lung function after treatment, with stabilization defined as freedom from FEV1 or FVC decline > 10 %. Finally, we evaluated for development of de novo donor specific antibodies and bacterial, fungal, or viral blood or respiratory infections.

Methodology: This is a retrospective, single-center study that included adults at least 18 years of age who received a primary bilateral lung transplant at Duke University Hospital and were treated with alemtuzumab for CLAD between December 2012 and October 2019. Excluded patients did not meet inclusion criteria or received a second dose of alemtuzumab within one year of the initial dose. Patients were identified by evaluating all alemtuzumab orders, and manual chart review was performed to exclude any patients without sufficient follow-up of one year.

Results: In progress

Conclusions: In progress

Objective: Describe the benefits and risks associated with alemtuzumab in lung transplant recipients with CLAD.

Self Assessment Question: Which of the following statements characterize the effect of alemtuzumab in lung transplant recipients treated for CLAD?

Presentation Link: https://www.youtube.com/watch?v=07RmOskBSKQ

9:45am – 10:00am A **40 - Evaluation of a Unit-Based Pharmacy Technician Practice Model** Room D

Presenters: Kyle Cornell

Evaluation of a Unit-Based Pharmacy Technician Practice Model

W Kyle Cornell, Dylan Nelson, John Donnelly, Marc Reichert, Andrew Wright, Alex Lux, Katherine D Mieure
WFB12 Wake Forest Baptist Health (Administration and Leadership with Masters)

Background: Wake Forest Medical Center (WFBMC) employs a medication distribution model that utilizes centralized pharmacy technicians. With the opening of a Labor & Delivery unit at WFBMC, unit-based pharmacy technicians were implemented to service this patient population exclusively. The purpose of this study is to evaluate the effect of a unit-based technician model on the medication distribution process, in comparison to a control patient care unit utilizing the centralized technician model.

Methodology: This evaluation is a single-center, observational, prospective cohort study, taking place February - July 2020 at an academic medical center comparing unit-based pharmacy technicians on a Labor & Delivery unit to centralized technicians servicing a control patient care unit. The primary endpoint is the percentage of item days listed as stock outs and critical low values in the automated dispensing cabinets. Secondary endpoints are the percentage of medication histories reviewed by a technician within 24 hours of admission, the average time for delivery of discharge medications to bedside, and nursing satisfaction survey scores.

Preliminary Results: *Initial results are from February and March data*. Percentage of item days listed as stock out or critical low: 1.31% (L&D) vs 0.92% (control). Percentage of medication histories collected within 24 hrs of admission: 71.92% (L&D) vs 70.18% (control). Average time for delivery of discharge medications: 47 min (L&D) vs 33 min (control). Initial nursing satisfaction survey results are similar between the two units
.
Conclusions: In Progress

Objective: Explain how the use of a unit-based technician model can expand the roles of pharmacy technicians and improve the medication use process.
Self Assessment Question: What is an advantage of using a unit-based pharmacy technician model?

Presentation Link: https://youtu.be/ai8gnfUD80M

9:45am – 10:00am B

38 - Determining the Impact of Pharmacist Interventions on Appropriate Aspirin Use in the Elderly Population Room B

Presenters: Jamie Coates

Determining the Impact of Pharmacist Interventions on Appropriate Aspirin Use in the Elderly Population
Jamie Coates, Amanda Stankowitz, Alexander Tunnell
MCCG1 Medical Center of Central Georgia
Background: To analyze current compliance in the Internal Medicine Clinic at Anderson Health Clinic (AHC) with the updated aspirin recommendations as included in the 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease as well as to evaluate the impact of a pharmacist on ensuring appropriate aspirin use in the elderly.
Methodology: A report was generated from August 28, 2019 to November 21, 2019 to identify AHC-managed patients over the age of 70 on aspirin therapy. A pharmacist analyzed the patient records to determine cardiovascular risk and appropriateness of aspirin therapy per ACC/AHA guidelines. Interventions to therapy were then made accordingly. The primary measure to assess pharmacist impact was the percentage of patients on appropriate aspirin therapy for primary prevention before and after pharmacist intervention.
Results: Ninety-two patients were identified who were older than 70 years of age on aspirin therapy. Fifty of those patients were on aspirin for secondary prevention and thus considered outside of the scope of the ACC/AHA primary prevention guideline focus. Of the 42 patients on aspirin for primary prevention, three patients were deemed to be on aspirin therapy inappropriately. Interventions were presented to the provider, and in each case, aspirin was discontinued as recommended. Therefore, pharmacist intervention increased adherence to aspirin recommendations per ACC/AHA guidelines from 93% to 100%.
Conclusions: The medication use evaluation demonstrated a high level of guideline adherence at baseline. The evaluation at AHC also highlighted an increase in appropriate therapies from collaborative care and pharmacist intervention.
Objective: Identify the impact of pharmacist interventions on appropriate aspirin use in an elderly population within an internal medicine clinic.
Self Assessment Question: What role can pharmacists play to ensure prescriber adherence to updated treatment guidelines?

Link to Presentation: https://youtu.be/36GejsPRMdY

9:45am – 10:00am B

41 - Impact of a clinical pharmacist practitioner led osteoporosis service in the primary care setting Room E

Presenters: Brittany Cox

Impact of a clinical pharmacist practitioner led osteoporosis service in the primary care setting
Brittany Cox, Sarah Palacio, Jamie Shaver, Maryann Choy-Ames
NHPM1 Novant Health Presbyterian Medical Center
Video URL: https://youtu.be/YN417PEMyBU
Background: The purpose of this study is to evaluate the impact of a clinical pharmacist practitioner (CPP) led osteoporosis service in the primary care setting.
Methodology: This was a multi-center, prospective, chart review. Postmenopausal women seen at select Novant Health primary care clinics from 10/01/19 to 03/31/20 with a diagnosis of osteoporosis or osteopenia, or DEXA scan score less than -1.0, and who were referred to the pharmacist, were included into the study. Patients diagnosed with osteoporosis due to secondary causes were excluded. Once CPPs completed office visits, the patient chart was routed to the primary investigator. The primary investigator then documented patient demographics in addition to the number and type of interventions made for the patient.
Results: A total of 36 patients were included in the study and the mean age was 74 years. Of those patients, 21% had a diagnosis of osteoporosis and 12% reported a previous fracture. CPPs led a total of 51 visits over the study period, and made an average of 4 interventions per patient. The most common interventions included counseling on pharmacotherapy, calcium and vitamin D supplementation, and weight bearing exercise. The CPP initiated pharmacotherapy in 44% of patients. Of those initiated on pharmacotherapy, the average time from diagnosis to drug therapy initiation was 68 days. The most commonly used billing code was 99211 which resulted in an average reimbursement of $22.00 per visit.
Conclusions: Pharmacists are vital members of the healthcare team and can positively contribute to closing the gap in care for patients with osteoporosis indicated for pharmacologic treatment.
Objective: Assess the impact of a clinical pharmacist practitioner led osteoporosis service in the primary care setting
Self Assessment Question: What type of interventions can be made by clinical pharmacist practitioners managing patients with osteopenia and osteoporosis?

9:45am – 10:00am Y **39 - Impact of a Pharmacy Navigator on Patient Experience in a Community Pharmacy** Room C

Presenters: Tony Cope

Impact of a Pharmacy Navigator on Patient Experience in a Community Pharmacy
Tony Cope, A. Luebchow, R. Schomberg, V. Gullett, K. Bricker, L. Thomas
Wake Forest Baptist Health
Background: Patient experience in community pharmacies is often driven by the efficiency of prescription processing and patient interactions with pharmacy staff. Common patient complaints include having to wait longer than told and a lack of communication from pharmacy staff. Although improving patient experience is a common goal, there were no studies identified that have placed a pharmacy staff member in the waiting area to proactively address patient concerns before they reach the point of sale.
Methodology: This was a quasi-experimental, single-site, non-randomized interventional study that was conducted in two 4-week blocks (pre and post implementation) at the main outpatient pharmacy of a large academic medical center. The primary objective of this study was to identify the pharmacy navigator's impact on patient experience which was measured through the net promoter score, a one question survey available to all patients on a kiosk as they exit the pharmacy. The secondary objective was the reduction in point of sale disruptions following the implementation of the navigator.
Results: Patient experience as measured by the net promoter score did not improve following the intervention. However, the pharmacy navigator did reduce the number of disruptions at the point of sale by 79%.
Conclusions: While an improvement in patient experience was not seen through the primary endpoint, patient experience did improve as a result of reduced disruptions at the point of sale.
Objective: Describe how a designated pharmacy staff member stationed in the pharmacy waiting area improves patient experience and reduces disruptions the at point-of-sale.
Self Assessment Question: Does proactively addressing disruptions at prescription pick-up improve patient experience?
Presentation Link: https://www.youtube.com/watch?v=bKVCWxHXh1U&feature=youtu.be

9:45am – 10:00am R **46 - EFFECT OF PHARMACIST-DRIVEN SERIAL PROCALCITONIN ORDERS ON ANTIBIOTIC DURATION OF THERAPY IN ICU PATIENTS WITH SEPSIS** Room J

Presenters: Jillian Davis

Effect of Pharmacist-Driven Serial Procalcitonin Orders on Antibiotic Duration of Therapy in ICU Patients with Sepsis
Jillian Davis, Joshua Chestnutt, Deanne Tabb, Matthew McAllister
PCRM1 Piedmont Columbus Regional Midtown
Background: Procalcitonin is a biomarker which is elevated in the setting of bacterial infection. Serial serum procalcitonin levels may be used to support providers in assessing clinical response to antibiotic therapy, allowing them to discontinue, streamline, and/or set evidence-based durations of therapy when assessed alongside other indicators of systemic response. This study aimed to assess the effect of a pharmacist-driven serial procalcitonin ordering protocol on total antibiotic duration of therapy in adult patients admitted to an intensive care unit (ICU) with sepsis or septic shock.
Methodology: An IRB-approved retrospective chart review was conducted to evaluate mean duration of antibiotic therapy before and after implementation of a pharmacist-driven serial procalcitonin ordering protocol. The protocol allowed inpatient pharmacists to guide appropriate and timely measurement of serial procalcitonin levels in adult patients admitted to an intensive care unit with sepsis or septic shock. The primary endpoint was difference in average duration of antibiotic therapy pre- and post- protocol implementation. The average duration of antibiotic therapy for adult patients admitted to ICU for sepsis or septic shock and receiving empiric antibiotics during the three months prior to protocol implementation was compared to that of adult ICU patients with sepsis or septic shock receiving empiric antibiotic therapy and having at least two procalcitonin measurements for the three-month period following protocol implementation to determine protocol impact. Excluded patients were those considered immunocompromised, admitted due to trauma, post-surgery, or already diagnosed with an infection requiring long-term antibiotic therapy. Secondary endpoints included in-hospital mortality and hospital length of stay, before and after protocol implementation.
Objective: Assess the effect of a pharmacist-driven serial procalcitonin protocol on antibiotic duration of therapy.
Self Assessment Question: Is pharmacist-driven procalcitonin ordering associated with an overall decrease in antibiotic duration of therapy?
Presentation Link: https://youtu.be/3NXwMagPDig

9:45am – 10:00am | **42 - EVALUATION OF A PHARMACIST-DRIVEN METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS POLYMERASE CHAIN REACTION SCREENING PROTOCOL FOR PNEUMONIA** Room F

Presenters: Steven Cross

EVALUATION OF A PHARMACIST-DRIVEN METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS POLYMERASE CHAIN REACTION SCREENING PROTOCOL FOR PNEUMONIA

Steven Cross, Jeffery Galyon, Cyle White
EHSC1 Erlanger Health Systems

Background: Methicillin-resistant Staphylococcus aureus (MRSA) is a common target for empiric therapy in patients being treated for pneumonia. Traditional microbiologic respiratory cultures can be difficult to collect and are often indeterminate of a causative organism. Nasal MRSA polymerase chain reaction (PCR) assays have shown to be an effective de-escalation tool in patients being treated for pneumonia due to their high negative predictive value. This study seeks to evaluate a pharmacist-driven protocol, where the pharmacist orders an MRSA PCR assay in patients being treated for pneumonia and can automatically discontinue vancomycin with a negative result.

Methodology: This retrospective, Intuitional Review Board approved study was conducted at an academic medical center. Data obtained via retrospective chart review included adult patients receiving vancomycin for pneumonia. Exclusion criteria consisted of admission to an intensive care unit or concomitant infection(s) requiring antibiotic treatment at time of nasal MRSA PCR result. The primary outcome of this study is to evaluate pharmacist impact on days of vancomycin therapy pre- and post-protocol. Secondary outcomes evaluate in-hospital mortality, 30-day readmission rate, hospital length of stay, protocol compliance, acute kidney injury events, and number of vancomycin troughs obtained.

Results: In process

Conclusions: In process

Objective: Evaluate pharmacist impact on days of vancomycin therapy for patients with pneumonia using a MRSA PCR screening protocol.

Self Assessment Question: Does a pharmacist-driven vancomycin auto-discontinuation policy for patients being treated for pneumonia reduce days of vancomycin therapy?

9:45am – 10:00am | **43 - Evaluation of antimicrobial selection and duration for uncomplicated and complicated cystitis** Room G

Presenters: Lauren Crump

Evaluation of antimicrobial selection and duration for uncomplicated and complicated cystitis

Lauren Crump, Jacinta Chin, Courtney Harper, Regis Bender
NHPM1 Novant Health Presbyterian Medical Center

Background: Recommendations for antimicrobial agent selection and duration for the treatment of uncomplicated and complicated cystitis are provided by the Infectious Diseases Society of America (IDSA) and the European Society for Microbiology and Infectious Diseases. Concordance to these guidelines is low, contributing to antibiotic resistance and risk for collateral damage. This retrospective analysis observed the compliance to guideline-directed therapy for cystitis.

Methodology: This was a multicenter, retrospective, IRB-approved chart review evaluating the duration and selection of antibiotic therapy in adult patients with uncomplicated and complicated cystitis. Patients were identified using ICD-10 codes. The primary endpoints were frequency of antibiotic duration and selection prescribed according to guideline recommendations.

Results: Appropriate antibiotic selection and duration occurred in 83 of 200 patients (41.5%). When analyzed individually, antibiotic selection was appropriate in 175 of 200 patients (87.5%), but appropriate duration occurred less frequently (98 of 200 patients, 49%). The most common initial agent utilized were beta-lactams (91.5%, primarily second- or third-generation cephalosporins) with minimal fluoroquinolone use (4.5%). Median antibiotic duration was five and six days for uncomplicated and complicated cystitis, respectively. Readmission for cystitis occurred in 11 patients with four urine cultures revealing no change. Additionally, treatment of asymptomatic bacteriuria was common, occurring in 75 of 162 patients (46.2%).

Conclusions: Considering higher rates of inappropriate antibiotic duration, antibiotic therapy in cystitis should be evaluated with a goal to limit excessive therapy beyond guideline-recommended duration. Additionally, antibiotic use in asymptomatic patients was excessive and may serve as an indication to omit antibiotic therapy.

Objective: At the conclusion of the presentation, the participant will be able to identify appropriate antibiotic therapy for the management of cystitis.

Self Assessment Question: What is an appropriate antibiotic therapy for the management of cystitis in a young, non-pregnant female with no underlying health conditions?

9:45am – 10:00am L **37 - Evaluation of insulin therapy on post-operative glucose control in diabetic surgical patients**

Presenters: Cindy Chung Room A

Evaluation of insulin therapy on post-operative glucose control in diabetic surgical patients

Cindy L. Chung, Brandon L. Tyndall, Kate A. Miller, Brittany Denning

SRMC1 Southeastern Regional Medical Center

Background: Diabetes mellitus is a common chronic disorder in the United States. Patients with diabetes have an increased incidence of surgical interventions. Studies have shown that poor glycemic control during the post-operative period is associated with increased rates of post-operative infections. The purpose of this study is to evaluate post-operative glucose control in surgical patients with diabetes when long-acting insulin was held versus given twenty-four hours prior to surgery.

Methodology: Data was collected from patients who had a diagnosis of diabetes mellitus using long-acting insulin between January 1, 2019 to December 31, 2019. Patients were included if they were at least 18 years of age, had a surgery that required them to be nil per os (NPO), and had a minimum stay of one night before the surgery. The primary outcome was glucose control defined as the percentage of point of care glucose readings within the goal range of 70 mg/dL to 180 mg/dL greater than 70 percent.

Results: All study outcomes showed no statistical difference in glucose control and safety between the insulin held and the insulin given group. However, in this study, there was a trend in decreased incidence of readmission related to diabetes mellitus, improved post-operative glucose control, and no increased risk of hypoglycemia with the insulin given group.

Conclusions: There was no difference in glucose control or safety when holding or giving insulin in surgical patients with diabetes twenty-four hours prior to surgery. A prospective study with a larger sample population is warranted to further investigate the trends found in this study.

Objective: Explain the difference between post-operative glucose control in surgical patients with diabetes when long-acting insulin was held versus given twenty-four hours prior to surgery.

Self Assessment Question: What is the effect on glucose control when holding long-acting insulin in surgical patients with diabetes twenty-four hours prior to surgery?

9:45am – 10:00am M **44 - A Multidisciplinary Approach To Reducing Errors In Total Parenteral Nutrition Management**

Presenters: Jason Cuaresma Room H

A Multidisciplinary Approach To Reducing Errors In Total Parenteral Nutrition Management

Jason Cuaresma, Teresa Pounds, Pamela Moye-Dickerson, Simon Tarpav

WSAM1 WellStar Atlanta Medical Center

Background: Total Parenteral Nutrition (TPN) is considered a high-alert nutritional support modality with previous studies providing evidence of a multidisciplinary team approach in the provision of specialized nutritional support to reduce TPN errors. The current standard of care at Wellstar Atlanta Medical Center (WAMC) involves the management of TPN by clinical pharmacists, while dieticians monitor enteral nutrition. In July 2019, a multidisciplinary nutritional support team was formed to round on patients receiving TPN and enteral nutrition in the critical care units. The purpose of this study is to evaluate the effectiveness of the recent piloting of a multidisciplinary nutritional support team in the critical care units at WAMC with reducing errors in total parenteral nutrition management.

Methodology: This is a single-center, observational study involving a historical control group and an interventional group observed over six months. The historical control group contains non-neonate patients admitted to WAMC from July 1st, 2018 to December 31st, 2018 initiated on TPN for more than 24 hours before the piloting of a multidisciplinary nutritional support team. The intervention group contains non-neonate patients admitted to WAMC from July 1st, 2019 to December 31st, 2019 during the piloting of a multidisciplinary nutritional support team. The intervention includes multidisciplinary patient rounds during the weekdays (Monday through Friday). Interventions made by the team during rounds are then logged and reviewed. These interventions are also reviewed during nutritional support subcommittee meetings for physician oversight.

Results: A total of 44 patients were enrolled in the control group, and 41 in the intervention group. All baseline characteristics shown for both the control and intervention groups were similar. Statistical significance was shown (p value of 0.005) for the percentage of days with presence of electrolyte abnormalities, with the intervention group favored at 40.3% versus 45.9% in the control group. Also, statistical significance was shown (p value of 0.005) regarding the total number of ordering errors, with the intervention group favored at 18 versus 21 in the control group.

Conclusions: This study showed that a multidisciplinary nutritional support team effectively reduced ordering errors and decreased the amount of days patients experience electrolyte abnormalities during the duration of TPN therapy. When these errors are identified and corrected, we can prevent potential harm from reaching the patient leading to improved patient outcomes.

Objective: At the conclusion of my presentation, the participant will be able to identify potential interventions that can be provided by members of a multidisciplinary nutritional support team.

Self Assessment Question: Which areas of the total parenteral nutrition prescription workflow contain the most errors?

9:45am – 10:00am O **45 - Comparison of First Dose Infusion-Related Hypersensitivity Reactions with Rituximab Administration When Line is Primed with Drug Versus Diluent** Room I

Presenters: Celia Curtis

Comparison of First Dose Infusion-Related Hypersensitivity Reactions with Rituximab Administration When Line is Primed with Drug Versus Diluent
Curtis CW, Valla K, Watson M, Brechtelsbauer E, Kannukkaden D, Cohen JB
EUHA1 Emory University Hospital

Background: Rituximab is an effective and widely used treatment for hematologic malignancies. Administration can be complicated by significant infusion-related hypersensitivity reactions (IRRs). Usually IRRs occur during the first exposure to rituximab. Current strategies to minimize first-dose IRRs include administering premedications and rate titration. A 2017 study found that priming the intravenous (IV) line with rituximab instead of normal saline (NS) significantly decreased the rate of first-dose IRRs. Recently, Winship Cancer Institute ambulatory infusion clinics required all rituximab infusion IV lines to be primed with rituximab instead of NS to reduce the number of IRRs. The purpose of this analysis is to determine whether this change resulted in decreased rates of first-dose IRRs in patients with lymphoid malignancies.
Methodology: This retrospective chart review was conducted on patients who received their first dose of rituximab at a Winship Cancer Institute ambulatory infusion clinic from November 1, 2017 to July 31, 2019. The primary outcome was the rates of first-dose IRRs to rituximab.
Results: Thirty-nine patients in the NS-primed group and 52 patients in the rituximab-primed group were included. Twenty patients in the NS-primed group (51.3%) and 23 patients in the rituximab-primed group (44.2 %) had first-dose IRRs, p=0.527. Most IRRs were mild and resolved with medication administration.
Conclusions: The rituximab-primed group had a lower frequency of IRRs than the NS-primed group, but this difference was not statistically significant.
Objective: Identify whether priming the rituximab infusion line with the drug itself reduces first-dose infusion reactions
Self Assessment Question: Does priming the infusion line with rituximab reduce first-dose infusion reactions?

Link to Presentation: https://youtu.be/fFIH3PU1uOk

9:45am – 10:00am O **47 - Optimization of Supportive Care in Haploidentical Stem Cell Transplant Recipients** Room K

Presenters: Jacquelyn Day

Optimization of Supportive Care in Haploidentical Stem Cell Transplant Recipients
Jacquelyn Day, PharmD; Katie Gatwood PharmD, BCOP; Kathryn Culos, PharmD, BCOP; Adetola Kassim, MD
Vanderbilt University Medical Center

Background: Cytokine release syndrome (CRS) and haploidentical fevers are a common and well described complication of haploidentical transplantation and occur in the 3 days prior to post-transplant cyclophosphamide (PTCy). Typically, patients are initiated on broad spectrum antimicrobial therapy for these fevers since the majority of patients are also neutropenic. Per published febrile neutropenia (FN) guidelines, patients initiated on broad spectrum antibiotics for FN must remain on therapy until they are no longer neutropenic. However, it is unknown if this should also apply to patients with known CRS/haploidentical fever where the cause of fever is unlikely to be due to infection

Methodology: A retrospective cohort study was conducted from January 2014 to September 2019 to identify patients who received a halpoidentical transplant at Vanderbilt Ingram Cancer Center. Patients will be excluded for the antibiotic arm of the study if they did not receive PTCy or receive broad spectrum antibiotics for FN. Culture data and maximum febrile temperature will be included secondary to the diagnosis of FN. Additionally, patients receiving filgrastim will be compared to those who did not receive filgrastim. An analysis will be performed to determine the time to engraftment and severity of associated GvHD.

Conclusions: The ability to decrease unnecessary utilization of broad spectrum antibiotics for FN before PTCy would be ideal to reduce antimicrobial resistance and adverse effects as well as healthcare cost.

9:45am – 10:00am S **48 - An Evaluation of the Incidence and Management of Postpartum PTSD** Room L

Presenters: Sophia DeBerry

An Evaluation of the Incidence and Management of Postpartum PTSD

Sophia DeBerry, Amy Holmes, Malinda Parman, J. Brock Harris
NHFM1 Novant Health Forsyth Medical Center

Background: Post-traumatic stress disorder (PTSD) is defined as an anxiety disorder consisting of four clusters of symptoms. Women who perceive pregnancies or birth as a traumatic event have a higher risk of postpartum PTSD. Identification and initiation of treatment and providing resources for patients suffering postpartum PTSD can improve the quality of life of postpartum mothers and infants. Through observation and development of strategies for identification and treatment of postpartum PTSD, initial care for new mothers and infants can significantly improve.

Methodology: This is a retrospective chart review of patients at Novant Health Forsyth Medical Center who have consented to Family Connect® data collection and live in Forsyth County. Patients were mothers greater than the age of 18 who had a live birth between January 1, 2019 and November 1, 2019. Patients were screened through the Edinburgh Postnatal Depression Scale (EPDS) and patients were then evaluated for PTSD symptoms, complications during birth, and treatment postpartum.

Results: One hundred forty-four patients were included with an EPDS score greater than or equal to 10. Seventy-one mothers had at least one of the four PTSD symptoms with 38% having previous diagnosed psychosis. Of those with previous diagnosis, 26% had been receiving treatment prior to or during pregnancy. Twenty of the patients that exhibited at least one trauma received treatment postpartum. Three patients received medications prior to or during pregnancy that were contraindicated and seven postpartum received treatment that was contraindicated in breastfeeding.

Conclusions: Of the patients who presented with PTSD symptoms, 28% of the patients received treatment based on their postpartum symptoms. Future studies should focus on evaluating larger patient populations to determine additional contributing factors to the development of postpartum PTSD and development of screening tools more specifically aimed at differentiating postpartum psychoses.

Objective: Identify postpartum patients suffering from PTSD and review potential risk factors and implemented treatments if applicable

Self Assessment Question: Which of the following is not indicative of postpartum PTSD?

a) A new mother avoiding interaction with her baby

b) A mother of four who is within 2 weeks of her most recent birth

c) A mother of a 6 month old with nightmares about of her birth experience

d) A new mother who is worried about work while on maternity leave but otherwise behaving normally towards her child

10:00am – 10:15am A **59 - Associations between empathy and burnout: trends among student pharmacists and recent graduates** Room K

Presenters: Megan Ealey

Associations between empathy and burnout: trends among student pharmacists and recent graduates
Ealey MR, Gamston CE, Kavookjian J, Hollingsworth JC, McGwin G, Lloyd KB
AUPH1 Auburn University Pharmacy Health Services
Background: Empathy, the practice of trying to understand the feelings of others, improves healthcare provider ability to provide patient-centered care by promoting focus on patient needs, leading to increased trust in provider recommendations and consequent health benefits. Burnout is a feeling of emotional exhaustion and diminished personal accomplishment which results in reduced effectiveness at work. In healthcare providers, burnout is associated with decreased productivity, impaired provider-patient relationships, and an overall reduction in the quality of care provided. Though available research has found a negative correlation between empathy and burnout in physicians and nurses, there is a lack of information about this relationship in pharmacists and student pharmacists.
Methodology: Current students and recent graduates of the Auburn University Harrison School of Pharmacy were invited to complete a survey assessing empathy, burnout, and other associated factors. The survey included the Jefferson Scale of Empathy (JSE), Maslach Burnout Inventory (MBI), Kiersma-Chen Empathy Scale (KCES), Pittsburgh Sleep Quality Index (PSQI), Big 5 Personality Test, Patient Health Questionnaire (PHQ-9), a modified Student Engagement Instrument (mSEI), and a Goal Orientation Model (GOM). The association between measures of burnout and empathy was evaluated using correlation coefficients and generalized linear models. Measures of burnout and empathy were compared between current students and recent graduates using t-tests and generalized linear models; non-parametric statistics were employed as deemed necessary.
Results: In Progress
Conclusions: In Progress
Objective: Assess the relationship between empathy and burnout in student pharmacists and recent graduates.
Self Assessment Question: What is the relationship between empathy and burnout in student pharmacists and recently graduated pharmacists?

10:00am – 10:15am R **50 - The Safety of Various Dosing Strategies of 23.4% Sodium Chloride for Intracranial Hypertension** Room B

Presenters: Keri Diehl

The Safety of Various Dosing Strategies of 23.4% Sodium Chloride for Intracranial Hypertension
Keri Diehl, Jennifer Wilson, April Quidley, Joseph Quinn, Manjunath Markand
VMCG2 Vidant Medical Center (Critical Care)
Background: To assess change in serum sodium, neurologic response, and survival to discharge in patients receiving 23.4% sodium chloride for acute treatment of intracranial hypertension at Vidant Medical Center.
Methodology: This single center retrospective review includes patients with hemorrhagic or ischemic stroke from November 2018 to October 2019 who received one or more 30 mL doses of 23.4% sodium chloride for intracranial hypertension. The following data was collected: patient age, gender, type of stroke, dose of 23.4% sodium chloride, route of administration, length of ICU stay, serum sodium, pupillary light response, mortality, and signs of osmotic demyelination syndrome (ODS). The primary endpoint is change in serum sodium greater than 8 mEq/L. Secondary endpoints include herniation reversal, incidence of osmotic demyelination syndrome (ODS), and survival to discharge.
Results: This study includes 81 patients (78%) with hemorrhagic stroke and 23 (22%) patients with ischemic stroke. Patients were divided into two dosing groups. The first group included 60 patients (58%) who received ≤2 vials of 23.4% sodium chloride, and the second group included 44 patients (42%) who received >2 vials. A significant change in serum sodium >8 mEq was observed between groups (>2 vials 31.8% vs. ≤2 vials 11.7%; p=0.04). Variables associated with increased sodium were larger doses of 23.4% sodium chloride, lower baseline serum sodium, and intraosseous route of administration (p=0.003, p<0.0001, and p=0.019). Survival to discharge was greater in the >2 vials group (70.5% vs. 31.7%; *p*<0.0001). Of the 39 patients with documented signs of brain herniation, reversal of herniation was greater in the ≤2 vials group (45% vs. 10.5%; p=0.016). No patients in either group experienced ODS.
Conclusions: Higher doses of 23.4% sodium chloride were associated to a significant increase in serum sodium. Patient receiving >2 vials of 23.4% sodium chloride had increased survival to discharge.
Objective: Assess changes in serum sodium due to various doses of 23.4% sodium chloride.
Self Assessment Question: Which routes of administration are considered safe for 23.4% sodium chloride?
https://www.youtube.com/watch?v=9ihM8lN-zQQ

10:00am – 10:15am R **60 - Analysis of heparin versus enoxaparin VTE prophylaxis in patients with sepsis** Room L

Presenters: Samantha Earley

Analysis of heparin versus enoxaparin VTE prophylaxis in patients with sepsis
Samantha Earley, Laura Frantz, Allison Gaddy
Background: Critically ill patients are known to be at an increased risk of venous thromboembolism (VTE), characterized as either deep vein thrombosis (DVT) or pulmonary embolism (PE), due to numerous risk factors. At this point, there have been there have been no head-to-head studies comparing enoxaparin to unfractionated heparin (UFH) for VTE prophylaxis. Sepsis guidelines recommend the use of low-molecular weight heparin (LMWH) over UFH, though there is an overall lack of compelling data to guide that recommendation. This study expands upon the currently available data by directly comparing UFH to enoxaparin to evaluate comparative incidence of adverse events and VTE, specifically in patients with sepsis.
Methodology: This study is a multi-center retrospective chart review. The primary endpoint was a composite incidence of major and minor bleeding events (classified using a modified TIMI score). Secondary endpoints included individual incidences of major and minor bleeding, incidence of thrombocytopenia, incidence of VTE, and mortality. Patients were included if they were ≥ 18 years old with a documented diagnosis of sepsis during the study period.
Results: 856 patients were assessed for eligibility and 53 were ultimately included - 11 in the enoxaparin group, and 42 in the heparin group. There were no differences observed in any of the specified outcomes.
Conclusions: No significant difference was observed in overall bleeding with UFH versus LMWH. There were not enough thrombotic events seen to accurately assess between-group differences. A larger study is needed to establish true between-group differences.
Objective: Identify optimal VTE chemoprophylaxis for patients with sepsis
Self Assessment Question: Which of the following is NOT a risk factor for VTE in critically ill patients? A) Central venous catheter placement, B) Need for vasopressors, C) Steroid use, D) Procedures

10:00am – 10:15am G **58 - Telehealth Geriatric Clinical Pharmacy Specialist Consultation: Integrated Management and Polypharmacy Review of Vulnerable Elders** Room J

Presenters: Odirichukwu Duru

Telehealth Geriatric Clinical Pharmacy Specialist Consultation: Integrated Management and Polypharmacy Review of Vulnerable Elders
Odirichukwu O. Duru, LaWanda Kemp, Anna K. Mirk
AVAH1 Atlanta Veterans Affairs Health Care System
Background: Older rural veterans experience challenges with accessing healthcare and higher rates of potentially inappropriate medication (PIM) use. Geriatric Research, Education and Clinical Center (GRECC) Connect is a 15-site Veterans Affairs (VA) clinical demonstration project to increase geriatric specialty consultation to rural veterans using telehealth. The Atlanta VA GRECC Connect program employed Integrated Management and Polypharmacy Review of Vulnerable Elders (IMPROVE) to increase access to geriatric clinical pharmacy specialists (CPS) in rural areas. The IMPROVE model of pharmacist-led individualized medication management has been shown in prior studies to effectively reduce polypharmacy and increase quality of prescribing for this population.
Methodology: The local Institutional Review Board deemed this project exempt from human subject oversight. Veterans were referred for tele-geriatric consultation by primary care providers and case-finding for high-risk veterans aged ≥75 years, prescribed ≥10 medications and having International Classification of Diseases codes indicating neurocognitive disorder. CPS and geriatrician visits were via telephone and clinical video telehealth, respectively, with the CPS IMPROVE encounter occurring the week prior to the geriatrician telehealth visit. CPS utilized a structured approach to medication review, including reconciliation, screening for barriers to adherence, safety and appropriateness. CPS relayed recommendations to the geriatrician via electronic medical record. Veterans seen for tele-geriatrics consultation between July 27, 2018 through March 1, 2020 were included. The primary outcome was the number of medications reduced. Secondary outcomes included number of PIMs reduced, CPS identified barriers to medication management and veteran satisfaction. Descriptive statistical tests and 2-tailed paired student t-test will be executed to analyze the data.
Results: In progress.
Conclusions: In progress.
Objective: Describe how a structured medication review can be integrated into a telehealth geriatric consultation.
Self Assessment Question: Does a structured approach to medication review by a clinical pharmacy specialist reduce polypharmacy in a geriatric telehealth clinic?

Audio-visual presentation link: https://www.youtube.com/watch?v=FX0Y167ar04&t=4s

10:00am – 10:15am | **49 - Impact of polymerase chain reaction rapid diagnostics on bacteremia in a community teaching hospital** Room A

Presenters: Kimberly Diaz

Impact of polymerase chain reaction rapid diagnostics on bacteremia in a community teaching hospital
Kimberly Diaz, Komal Patel, Leigh Ann Morrison, Sarah Fraker
RRMC1 Redmond Regional Medical Center
Background: Purpose/Background: For the treatment of bacteremia, it is recommended to use broad empiric antibiotic coverage, with the intent to de-escalate. Traditional blood cultures require an extended amount of time to allow for bacterial growth, causing pathogen identification to result sometimes days later. Polymerase chain reaction (PCR) assays are a rapid diagnostic tool used to identify pathogens and make this data available within an hour of the gram stain, allowing for expedited transition of antibiotics. This study aims to evaluate the impact of PCR rapid diagnostics implementation and education on average hours to antibiotic de-escalation in patients with positive blood cultures.
Methodology: Methods: A retrospective quasi experimental study at a 230 bed community teaching hospital assessed antibiotic de-escalation pre implementation (November 2018-January 2019) and post implementation (November 2019- January 2020) of PCR blood culture identification panel. PCR education as an intervention was provided to clinicians. The patient population included adults > 18 years with bacteremia who were admitted to the hospital. The primary outcome was time to first appropriate antibiotic de-escalation in average hours from positive blood culture result. Secondary outcomes include incidence of Clostridium difficile and cost of accelerated de-escalation of antibiotics.
Results: Results: Data collection is currently ongoing. From an initial list of 77 patients collected via pharmacy surveillance software, 50 patients were included in the pre-implementation group. These patients had their antibiotics de-escalated in an average of 52 hours.
Conclusions: In progress
Objective: Compare time to de-escalation of antibiotics before and after PCR implementation.
Self Assessment Question: What impact does PCR have on time to de-escalation of antibiotics?

10:00am – 10:15am | **51 - Evaluation of MRSA Nasal PCR Screening on Duration of Vancomycin in the Empiric Treatment of Pneumonia at a Community Teaching Hospital** Room C

Presenters: John Dilks

Evaluation of MRSA Nasal PCR Screening on Duration of Vancomycin in the Empiric Treatment of Pneumonia at a Community Teaching Hospital
John Dilks, Brianna Qualls, Keith Johnson
RRMC1 Redmond Regional Medical Center
Background: Determine the effect of MRSA nasal PCR screening on duration of vancomycin therapy in inpatients with pneumonia
Methodology: Eligible patients were those ≥ 18 with a diagnosis of pneumonia for whom pharmacy is consulted to dose vancomycin. MRSA nasal swabs were ordered by staff pharmacists and delivered with the first vancomycin dose for collection by nursing. Clinical pharmacists reviewed patients with negative swab results for appropriateness of discontinuation and made recommendations to the attending physician.
Results: Pre-implementation data was collected for 100 randomly selected patients. So far, 64 post-implementation patients have been included in this IRB-approved study. The mean reduction in vancomycin duration was 19 hours ($p < .001$, 95% CI [33.75, 44.02]). 4 of the 64 patients (6.25%) in the post-implementation group and 12 of the 100 pre-implementation patients (12%) experienced an AKI. There was a statistically significant reduction in mean number of therapeutic drug monitoring lab draws (0.59 draws, $p < .001$) and clinical pharmacist EMR notes (0.48 notes, $p = .01$).
Conclusions: We observed a significant decrease in vancomycin duration via a pharmacy-driven MRSA PCR nasal swab pre-screening protocol. At our institution, MRSA swabs are analyzed in batches once per day on weekdays, which is our primary limitation; similar protocols at other institutions have observed greater reductions in mean vancomycin duration. Further research is necessary to assess the effects of such a protocol on incidence of AKI, number of therapeutic lab draws, and clinical pharmacist productivity.
Objective: Describe potential benefits of a pharmacy-driven MRSA nasal swab pre-screening protocol.
Self Assessment Question: What is one of the ways that a pharmacy-driven MRSA PCR nasal pre-screening protocol can improve patient care?

10:00am – 10:15am | **52 - Pharmacy Guided Procalcitonin Ordering in Adult Inpatients with Lower Respiratory Tract Infections** | Room D

Presenters: Katie Dircksen

Pharmacy Guided Procalcitonin Ordering in Adult Inpatients with Lower Respiratory Tract Infections
Katie Dircksen, Dustin Bryan, Riley Bowers, Emily Woodfield, Serina Tart
CFVM Cape Fear Valley Medical Center
Background: Procalcitonin (PCT) monitoring has been shown to aid in appropriate antibiotic use, especially in lower respiratory tract infections (LRTI). Due to the specificity for bacterial infection, a high PCT level suggests antibiotics are indicated, while low PCT levels discourage antibiotic use. A Cochrane review meta-analysis in 2012 found that initial PCT guidance decreased antibiotic use by 60-70% in patients presenting with low-severity respiratory tract infections without increasing morbidity or mortality. Due to the quick and predictable kinetic decline of PCT with resolution of infection, monitoring PCT values can help determine when de-escalation or discontinuation of antibiotics is appropriate. The purpose of this project is to determine if a pharmacist guided PCT ordering protocol and algorithm for patients presenting with LRTI decreases total days of antibiotic duration.
Methodology: This single-center, quasi-experimental, quality-improvement initiative was conducted in compliance with the pilot pharmacist-directed PCT protocol approved by the Cape Fear Valley P&T Committee. Adult patients in the intervention group were identified and reviewed prospectively for inclusion in the protocol by a pharmacist from November 1, 2019 to January 31, 2020. The control group included adult patients admitted from November 1, 2018 to January 31, 2019 and were identified using diagnosis billing codes for LRTI. Using an unpaired student t-test with 95% confidence intervals, we will compare time to antibiotic discontinuation in days for patients in the control and intervention groups.
Results: In progress
Conclusions: In progress
Objective: Determine whether pharmacy guided PCT ordering in adult inpatients with LRTI decreases the total antibiotic duration in days.
Self Assessment Question: What type of recommendations were physicians most likely to accept?
https://www.youtube.com/watch?v=be8cuCDhhvs&t=29s

10:00am – 10:15am | **53 - IMPACT OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) NASAL POLYMERASE-CHAIN REACTION (PCR) SCREENING ON VANCOMYCIN THERAPY IN PNEUMONIA** | Room E

Presenters: Gabby Do

IMPACT OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) NASAL POLYMERASE-CHAIN REACTION (PCR) SCREENING ON VANCOMYCIN THERAPY IN PNEUMONIA
Gabby Do, Deanne Tabb
PCRM1 Piedmont Columbus Regional Midtown
Background: Prolonged used of empiric antibiotics can increase antibiotic resistance, healthcare costs, and risk of adverse effects. The objective of this study was to demonstrate the impact of a pharmacist-driven MRSA nasal PCR screening protocol on duration of vancomycin therapy and clinical outcomes in patients newly admitted for pneumonia.
Methodology: An IRB approved retrospective chart review was conducted of adult patients on general medicine floors who were treated for pneumonia and received empiric vancomycin within 48 hours of admission. Data was collected in a pre-post cohort design before and after implementation of an order set which included MRSA nasal PCR when vancomycin was ordered for pneumonia. The pre-implementation period included October 17, 2019 to December 15, 2019, and the post-implementation period included December 16, 2019 to February 13, 2020. Patients were excluded for the following reasons: history of MRSA infection or documented nares decolonization within the past 30 days; diagnosis of structural lung disease; or documented evidence of hospital-acquired, ventilator-associated, necrotizing, or cavitary pneumonia. The primary endpoint evaluated was vancomycin duration of therapy. Secondary endpoints included vancomycin days of therapy per 1000 patient days, days of vancomycin therapy avoided, rates of vancomycin discontinuation following negative MRSA screen, rates of vancomycin restart within 72 hours of discontinuation, infection-related thirty-day readmission, rates of acute kidney injury, concordance with sputum cultures, and rates of missed MRSA screening opportunities.
Results: In Progress
Conclusions: In Progress
Objective: Describe the impact of protocolized MRSA nares screening on de-escalation of vancomycin therapy.
Self Assessment Question: What patient specific factors should be taken into consideration when determining appropriateness of MRSA nares screening?
Presentation Link: https://youtu.be/YgLGuRcAKyE

10:00am – 10:15am | I

57 - Evaluation of an outpatient parenteral antimicrobial therapy (OPAT) program at a large academic medical center

Room I

Presenters: Emily Drwiega

Evaluation of an outpatient parenteral antimicrobial therapy (OPAT) program at a large academic medical center
E Drwiega, R Andruski, M Schechter, M Maxam, S Rab, J Wong, M Patel
GMID2 Grady Memorial Hospital (Infectious Diseases)

Background: Outpatient parenteral antibiotic therapy (OPAT) is a management strategy to administer intravenous antimicrobials following hospital discharge. Patients who receive outpatient antibiotics typically require a peripherally inserted central catheter (PICC). PICC-associated complications can be severe, including catheter-associated infections. Ensuring PICCs removal quickly after OPAT is complete is imperative. Potential advantages of OPAT include: decreased hospital length of stay, improved patient satisfaction, and reduced inpatient costs.

Methodology: This single-center, institutional review board approved, retrospective, observational study at Grady Health System evaluated patients who received OPAT pre- and post-implementation of an OPAT program. The OPAT program was established in March 2018. The pre-OPAT group included patients referred from January 1, 2017 through March 31, 2018 and the post-OPAT group included patients referred from April 1, 2018 through June 30, 2019. All patients at least 18 years of age that were discharged on OPAT and referred for management were included. Patients were identified utilizing OPAT referrals from inpatient home health records. The primary outcome of this study was to determine the proportion of patients with documented PICC removal before and after the establishment of an OPAT program. Secondary outcomes included emergency department encounters during treatment.

Results: In total 450 patients were included, 230 in the pre-OPAT group and 220 in the post-OPAT group. In the pre-OPAT group, 180 (73.8%) patients had a documented PICC removal compared to 213 (86.6%) patients in the post-OPAT group ($p<0.001$). Fifty-one (20.9%) patients in the pre-OPAT group had at least one emergency department visit compared to 72 (29.3%) patients in the post-OPAT group ($p<0.033$).

Conclusions: More patients had documentation of PICC removal following the establishment of a dedicated OPAT program.

Objective: Describe the benefits of a dedicated OPAT program on rate of documented PICC removal on patients receiving OPAT.

Self Assessment Question: What are potential complications of PICCs?

10:00am – 10:15am L **54 - The Impact of a Pharmacy-Driven Stress Ulcer Prophylaxis De-escalation Protocol for General Medicine Inpatients** Room F

Presenters: Lynn Doan

The Impact of a Pharmacy-Driven Stress Ulcer Prophylaxis De-escalation Protocol for General Medicine Inpatients

Lynn Doan, Matthew McAllister, Ryan Crossman, Katie Fulks

PCRM1 Piedmont Columbus Regional Midtown

Background: Stress ulcer prophylaxis (SUP) is commonly seen in general medicine patients at low risk for developing stress ulcer-related mucosal disease. Unfortunately, many of them continue these medications after hospital discharge, which may lead to long-term use. To minimize the risk of adverse effects (Clostridium difficile infections, pneumonia, and various electrolyte derangements), it is recommended to de-escalate SUP once risk factors for stress ulcers have resolved. The purpose of the study is to evaluate the impact that implementation of a SUP de-escalation protocol has on duration of SUP therapy in general medicine patients.

Methodology: An IRB-approved retrospective chart review was conducted to evaluate patients on proton pump inhibitors or histamine H2 receptor antagonists before and after implementation of the SUP de-escalation protocol at Piedmont Columbus Regional Midtown. Patients were included if they were age 18 and older, admitted to a general medical ward, and received pantoprazole, esomeprazole, famotidine, or ranitidine for SUP between July 1, 2019 and March 31, 2020. Patients were excluded if they were receiving the above agents prior to hospital admission or were receiving them for any indication besides SUP. A random sample of 200 patients during the stated time period was included in the study (100 patients per group). The primary outcome was percentage of patients who continued SUP upon discharge before and after protocol implementation. The secondary outcomes included: cost savings associated with days of SUP therapy avoided, average duration of SUP therapy, total days of SUP therapy avoided; incidence rates of hospital-acquired pneumonia, Clostridium difficile infections, and hypomagnesemia; and development of active gastrointestinal bleeding or stress ulceration.

Results: In Progress

Conclusions: In Progress

Objective: Describe how the implementation of a SUP de-escalation protocol can affect clinical and economic outcomes.

Self Assessment Question: What are the benefits of having a SUP de-escalation protocol?

Presentation Link: https://youtu.be/6D8PU6T7orA

10:00am – 10:15am P **55 - Impact of an opioid stewardship initiative involving early conversion to oral narcotics in postoperative orthopedic patients** Room G

Presenters: Jacklyn Downey

Impact of an opioid stewardship initiative involving early conversion to oral narcotics in postoperative orthopedic patients

Jacklyn Downey; John Adams; Stephanie Tanner; Alex Ewing; Michael Wagner
GHSG1 Greenville Health System

Background: Opioid stewardship initiatives are one of the many methods contributing to the nationwide efforts to help reduce the prescribing of narcotics in post-surgical patients. Prisma Health – Upstate introduced their own opioid stewardship initiative by changing their orthopedic post-operative pain protocol to automatically convert orthopedic patients from intravenous (IV) to oral (PO) narcotics at 24-hours. The purpose of this retrospective study is to determine if the implementation of an opioid stewardship initiative effects outcomes in patients.

Methodology: This single-center retrospective chart review compared adult patients undergoing procedures involving the lower extremity during the specified six-month time periods. Patients were excluded if they met any of the following criteria: use of intrathecal or nerve blocks, contraindication to narcotics, nothing by mouth orders 24-hours post-surgery, ICU stay longer than 48-hours, intubation or receiving tube feeds. The primary outcome of this study was total opioid utilization in morphine milligram equivalence (MME) at 48-hours post-surgery.

Results: 495 patients were included in the study. Prior to controlling for factors, the total mean MME at 48-hours post-surgery was 102.1 and 99.3 in the pre- and post-implementation groups respectively (p=0.756). The average pain scores at 12, 24 and 48 hours post-operatively were not statistically different among the two groups. A multivariate linear regression model was performed and upon controlling for specified factors it estimated a 22.95 MME reduction in the post-implementation group compared to the pre-implementation group (p=0.003). Adverse drug reactions were similar between both groups.

Conclusions: Converting from IV to PO narcotics 24-hours post-orthopedic surgery provides a statistically significant reduction in total mean MMEs at 48-hours post-surgery and provides adequate pain control.

Objective: Determine if an institution’s opioid stewardship initiative effects outcomes in orthopedic patients

Self Assessment Question: Early substitution of oral opioid therapy is a viable alternative to IV therapy in the presence of an opioid epidemic?

Presentation Link:

https://youtu.be/NqIzez8JZf0

10:00am – 10:15am D **56 - Evaluation of Implementing a Vancomycin-Specific Pediatric Dosing Algorithm in a Large Academic Medical Center** Room H

Presenters: Chelsea Drennan

Evaluation of Implementing a Vancomycin-Specific Pediatric Dosing Algorithm in a Large Academic Medical Center

Chelsea Drennan, C. Alexander, J. Brownlee, H. Hughes, S. Withers, A.Ewing
GHSG1 Greenville Health System

Background: Limited data exist demonstrating appropriate dosing recommendations to achieve therapeutic vancomycin trough concentrations in pediatric patients. The purpose of this study is to determine if implementing a pediatric-specific vancomycin dosing protocol has an impact on initial therapeutic trough concentrations.

Methodology: This is a single-center, retrospective, pre- and post-intervention analysis. The pre-implementation period included January 1, 2019 to March 31, 2019. The post-implementation period included January 1, 2020 to March 31, 2020. Patients 0-18 years of age, admitted to Prisma Health--Upstate Children's Hospital, Greenville Memorial Campus, receiving intravenous vancomycin therapy for a presumptive/confirmed indication with a trough concentration obtained were included in the study. The primary outcome is the percentage of vancomycin encounters attaining an initial therapeutic vancomycin trough concentration. Secondary outcomes include time to therapeutic trough concentration, vancomycin-related toxicity, inappropriately drawn trough concentrations, and pharmacist compliance with dosing algorithm.

Results: Eighty-one patients were included, forty-two in the pre-implementation group and thirty-nine in the post-implementation group. Baseline characteristics were similar between groups. The number of initial therapeutic trough concentrations was 17 (40%) compared to 12 (31%) in the pre- and post-implementation groups (p=0.49), respectively. Time to therapeutic trough concentration was 18.7 ± 2.6 hours compared to 15.2 ± 6.8 hours in the pre- and post-implementation groups, respectively (p=0.06).

Conclusions: Implementation of the dosing algorithm did not improve the number of initial therapeutic trough concentrations; however, the time to therapeutic trough concentration was decreased. Underutilization of the algorithm could contribute to the low number of initial therapeutic trough concentrations in the post-implementation group.

Objective: Determine the effect of implementing a vancomycin-specific pediatric dosing algorithm on initial therapeutic trough concentrations.

Self Assessment Question: Which of the following indications does not require a target trough level of 15-20 mcg/mL per the IDSA?

https://vimeo.com/409931116

10:15am – 10:30am R **69 - Describing the safety and efficacy of low-dose ketamine for pain in the emergency department** Room I

Presenters: Reaghan Erickson

Describing the safety and efficacy of low-dose ketamine for pain in the emergency department

Reaghan Erickson, Derrick Clay, Angie Wilson
SBMC1 Spartanburg Medical Center

Background: Ketamine is an NMDA receptor antagonist that has been shown to be safe, effective, and relatively well tolerated when used in low doses for pain. No established guidelines exist to inform dosing for low-dose ketamine, but published research recommends a dosing range of 0.1-0.5 mg/kg. The purpose of this study is to describe the safety and efficacy of 0.15 mg/kg verses 0.3 mg/kg of ketamine for pain in the emergency department (ED).

Methodology: This study was a multicenter, retrospective chart review of adult patients who received at least one dose of ketamine for pain in the ED from June 1, 2018 to December 31, 2019. The primary outcome of this study was average pain score reduction between groups in patients receiving each ketamine dosing regimen. Baseline characteristics were reported for each dosing group, and data was analyzed using appropriate statistical tests based on type and normality of data.

Results: 97 patients were included in the study. Background characteristics were similar between groups, with the exception of patients in the 0.3 mg/kg ketamine group being more likely to receive a non-opioid analgesic before ketamine administration. Change in pain score from baseline was not significantly different between dosing groups (-2.38 vs -3.94, p=0.07). Post ketamine analgesic use, vital sign changes, and adverse effects were also not different between groups. Of note, only six adverse effects were reported in the entire population and all were in the 0.3 mg/kg ketamine group.

Conclusions: There was no difference in pain score reduction when using 0.15 mg/kg versus 0.3 mg/kg of low-dose ketamine for pain in the emergency department in this study. Adverse effects were likely under-reported and not significantly different between groups.

Objective: Describe the safety and efficacy of two different dosing regimens of ketamine for pain management

Self-Assessment Question: True or false. When recommending dosing regimens of low-dose ketamine for pain, 0.3 mg/kg appears to be more effective than 0.15 mg/kg.

Presentation Link: https://youtu.be/ybqjo8Tzz98

10:15am – 10:30am R **70 - Impact of Intraoperative Mannitol Administration on Renal Outcomes in Cardiothoracic Surgery** Room J

Presenters: Dena Evans

Impact of Intraoperative Mannitol Administration on Renal Outcomes in Cardiothoracic Surgery
D Evans, S Kram, J Schultheis, E Poehlein, Z Yang, B Kram
DUHD1 Duke University Hospital
Background: Post-operative acute kidney injury (AKI) is a common complication following cardiothoracic surgery and contributes to worse patient outcomes. Cardiopulmonary Bypass (CPB), a procedure necessary for many cardiothoracic surgeries, can worsen the occurrence of AKI perioperatively. The aim of our study is to determine whether mannitol during CPB decreases the incidence of AKI in patients undergoing cardiothoracic surgery.
Methodology: This retrospective study included patients 18 years of age or older undergoing coronary artery bypass graft (CABG) or valvular surgery admitted between September 1, 2013 and September 1, 2019. Patients were categorized into two groups: those who received mannitol in the priming fluid during CPB, and those who did not. Patients were excluded if a baseline serum creatinine (SCr) wasn't recorded, received concomitant surgical procedures other than CABG or valvular surgery, baseline chronic kidney disease or AKI, SCr prior to CPB increased by 30% from admission, received nephrotoxic agents within 24 hours of CPB, received intravenous contrast within 48 hours of CPB, received mannitol for any other reason, re-operation requiring CPB, organ transplantation during index admission, or those who received extracorporeal membrane oxygenation or external ventricular assist device. The primary endpoint was to determine the incidence of AKI using "RIF"of RIFLE (Risk, Injury, Failure, Loss of Kidney Function, and End Stage Kidney Disease) criteria. Secondary endpoints included the amount of fluid resuscitation received in the post-CBP period, the incidence of renal replacement therapy during hospital admission, and the incidence of AKI stratified by the dose of mannitol.
Results: In Progress
Conclusions: In Progress
https://youtu.be/9ZSymf73M7c
Objective: To determine whether mannitol administration during CPB decreases the incidence of AKI of patients who undergo cardiothoracic surgery
Self Assessment Question: Which of the following are risk factors for the development of AKI during cardiothoracic surgery?

10:15am – 10:30am R **71 - Effects of an opioid bolus algorithm within an ABCDEF bundle on total opioid administration in the intensive care unit** Room K

Presenters: Michael Fan

Effects of an opioid bolus algorithm within an ABCDEF bundle on total opioid administration in the intensive care unit
Michael Fan, Cassie Hamilton, Megan Van Berkel Patel, Mia Malin
EHSC1 Erlanger Health Systems
Background: In the setting of mechanically ventilated patients, light sedation has been shown to decrease length of stay and improve outcomes. Fentanyl is a common first-line agent in the management of analgosedation for mechanically ventilated patients. A bolus-dosing algorithm for fentanyl within an ABCDEF protocol was created in an attempt to decrease total fentanyl use and maintain light sedation goals.
Methodology: This study was conducted in a closed medical intensive care unit (MICU) at an academic medical center. Patients were included in the study if they were mechanically ventilated in the MICU and received fentanyl. Exclusion criteria consisted of patients mechanically intubated > 24 hours prior to admission to the MICU, > 24 hours at outside hospital prior to transfer, Glasgow Coma Scale < 4 prior to intubation, total intubation time < 12 hours, or receiving a continuous infusion of a neuromuscular blocker. Pre-protocol patients were compared with post-protocol patients to determine if the implementation of a bolus-dosing algorithm decreased total fentanyl use.
Results: The implementation of a bolus-dosing algorithm showed a decrease in average fentanyl use (1178 mcg vs 1082 mcg), time spent on a fentanyl infusion (36h vs 24h), MICU length of stay (4.18 days vs 3.92 days), in-hospital mortality (64% vs 38%), and an increase in Ventilator Free Day score (1 vs 24). Statistical analysis pending.
Conclusions: Implementation of a bolus-dosing algorithm overall improved outcomes for mechanically ventilated patients in the ICU.
Objective: Describe the efficacy of a fentanyl bolus-dosing protocol within an ABCDEF bundle
Self Assessment Question: Does a bolus-dosing fentanyl protocol decrease total fentanyl use in mechanically ventilated ICU patients?

Presentation: https://www.youtube.com/watch?v=IX9Q7p7ylSE

10:15am – 10:30am I **67 - Evaluation of a Novel Multiplex Molecular Panel in Patients with Suspected Hospital-Acquired Pneumonia** Room G

Presenters: Brad Erich

YouTube Video: https://youtu.be/79UhZGqduTA

Evaluation of a Novel Multiplex Molecular Panel in Patients with Suspected Hospital-Acquired Pneumonia
B. Erich, A. Kilic, E. Palavecino, J. Johnson, J. Williamson, J. Beardsley
WFBH1 Wake Forest Baptist Health
Background: The FilmArray Pneumonia Panel is a multiplex PCR panel that can detect and identify nucleic acids from respiratory pathogens as well as resistance genes in respiratory specimens. Evaluating the test's potential clinical impact is important before implementation.
Methodology: This retrospective study was conducted at an 885-bed academic medical center and evaluated patients with HAP. All tracheal aspirate and BAL cultures collected between November 2019 and April 2020 from patients in the MICU, SICU, and TICU were identified. 15 patients with negative respiratory cultures (5 each from the MICU, SICU and TICU) and 45 patients with positive respiratory cultures (20 from MICU, 15 from SICU and 10 from TICU) were randomly selected for evaluation. If patients failed to meet the diagnostic criteria for HAP, another patient from the same category was randomly selected for evaluation. No patient was included more than once. Respiratory samples were tested using the FilmArray Pneumonia Panel and results were compared to the respiratory culture. Chart review was performed by at least two investigators to determine potential changes in antimicrobial therapy had the panel results been known in real time. The primary endpoints are the number of times the potential antibiotic change would have resulted in treatment of previously uncovered pathogens and the time to adequate therapy if FilmArray results were known by treatment team in real time. Secondary endpoints include identification of patient population(s) where results would have the highest impact, cost analysis including cost of test and potential savings in antibiotic costs, and agreement of the test results. Data were analyzed using descriptive statistics.
Results: In Progress
Conclusions: In Progress
Objective: Identify the utility of the FilmArray Pneumonia Panel in patients with suspected hospital-acquired pneumonia (HAP).
Self Assessment Question: What is the predicted impact of the FilmArray Pneumonia Panel on patient care?

YouTube Video: https://youtu.be/79UhZGqduTA

10:15am – 10:30am L **66 - Impact of initial eGlycemic Management System dosing strategy on time to goal blood glucose range** Room F

Presenters: Amir Emamdjomeh

Authors: Emamdjomeh A, Warren J, Harper C, Olin J
Practice Site: Novant Health Presbyterian Medical Center
Objective: The goal of this study is to evaluate the impact of initial Glucommander™ (GM) insulin dosing strategies on subcutaneous glycemic management at Novant Health (NH).
Purpose/Background: Achieving adequate glycemic control in hospitalized patients poses a challenge to many health systems. GM an electronic glycemic management system, was implemented across NH as the standard of care for glycemic control. Proper utilization and implementation of GM is important in order to improve time to target blood glucose (BG) range, and decrease hospital length of stay, hypoglycemic and hyperglycemic events.
Methods: This study was an IRB approved, retrospective chart review. The primary endpoint includes time to target glucose range. The secondary endpoints include, percentage of blood glucose values in target range, percentage of initial orders following Glytec-NH recommendations, length of stay, average BG, incidence of hypoglycemic and hyperglycemic event.
Results: Patients treated with a multiplier initial GM setting had significantly lower total daily dose of home insulin than patients treated with custom initial settings (32 ± 38 vs 62 ± 61 units, P = <.001). Median time to target BG was not significantly different between multiplier and custom groups (64 vs 55 hours, P = 0.07). Goal blood glucose was achieved in less than half of the study patients in both multiplier and custom groups (44% vs 47%). Multiplier orders were less adherent to the Glytec-Novant Health criteria (41% vs 60%).
Conclusion: Custom initial GM insulin dosing settings showed a non-statistically significant, trending towards significant, decrease in time to target BG range compared to multiplier settings. Future studies evaluating the impact of compliance with Glytec-NH recommendations on BG control are warranted.
Self-Assessment Question: Which initial GM dosing strategy resulted in improved outcomes for inpatient glucose control?

10:15am – 10:30am M **62 - Evaluation of angiotensin converting enzyme inhibitor-induced angioedema** Room B

Presenters: Abby Ellington

Evaluation of angiotensin converting enzyme inhibitor-induced angioedema
Abby Ellington, Melissa Maccia, Stephanie Shuder, Michael Simpson
ARMC1 Alamance Regional Medical Center - Cone Health
Background: Evaluate angiotensin converting enzyme (ACE) inhibitor-induced angioedema to identify key characteristics of those patients.
Methodology: Eligible patients include those 18 years and older presenting with a diagnosis of angioedema and a history of ACE inhibitor use. Retrospective chart review was conducted to gather baseline demographic data, including race, age, sex and allergies as well as medications prior to admission (specifically ACE inhibitor, dipeptidyl peptidase-4 inhibitor, nonsteroidal anti-inflammatory drugs, and aspirin). Patient smoking status was also assessed. Patient allergies were collected both prior to the encounter and following the encounter.
Results: Of the 102 identified patients, 44% were male and 63% were African American. The most common ACE inhibitor identified was lisinopril. Among patients presenting with angioedema, 62 had a history of smoking. Most patients were treated in the Emergency Department and discharged after a period of observation. Thirty-eight percent of patients did not have a proper documentation of their allergies to reflect ACE inhibitors. There was a decline in number of cases by year from 2016 to 2017 with a slow increase over the following two years.
Conclusions: There certainly appears to be a relationship among smoking status and ACE inhibitor-induced angioedema. Angioedema was also more common among African American patients. Additionally, we identified a need for improved adherence with updating allergies to accurately reflect an ACE inhibitor allergy prior to discharge.
Objective: List potential risk factors for development of ACE inhibitor-induced angioedema.
Self Assessment Question: How can a pharmacist ensure that patients with ACE inhibitor-induced angioedema do not experience additional adverse events?
Contact information: abby.ellington@conehealth.com

10:15am – 10:30am M **64 - Development and Implementation of a Pharmacy Student Medication Order Verification Simulation** Room D

Presenters: Theresa El-Murr

Development and Implementation of a Pharmacy Student Medication Order Verification Simulation
Theresa El-Murr, Shelley Carruba, Jonathan Fowler, Emily Vance
UAHB1 University of Alabama at Birmingham Hospital
Background: Design and implement a pharmacy medication order verification simulation for fourth year pharmacy students to assess the impact of simulation on student confidence.
Methodology: Eligible participants in the simulation were students > 18 years old completing their Advanced Pharmacy Practice Experience (APPE) rotation at UAB Hospital between October 2019 and February 2020. The simulations occurred on weeks three and five of each APPE rotation with the simulation case in week five increasing in degree of complexity. Simulated patient electronic health records (EHRs) were built in the training domain of Cerner®, with each participant assigned his or her own patient chart to review and take action on medication orders. The student simulation activity consisted of pre-briefing, completion of the simulation case, and de-briefing. A survey was administered before and after the simulation activity to assess the impact of the simulation on the confidence levels of those who participated.
Results: We found a significant increase in student confidence with using an EHR to detect drug therapy problems and to verify or reject an order in the simulation environment. The majority of the students strongly agreed that the sactivity was a worthwhile learning experience.
Conclusions: This simulation activity enhanced the confidence of the students who participated and was a worthwhile addition to the APPE learning experience.

Objective: At the conclusion of my presentation, the participant will be able to describe the role of simulation on a pharmacy student medication order verification simulation.
Self Assessment Question: What are advantages of using simulation for pharmacy students in a medication order verification simulation?

10:15am – 10:30am O **65 - Olanzapine for the prevention of chemotherapy-induced nausea and vomiting in adult autologous hematopoietic cell transplant patients** Room E

Presenters: Grace Elsey

Olanzapine for the prevention of chemotherapy-induced nausea and vomiting in adult autologous stem cell transplant patients

Grace Elsey, LeAnne Kennedy, Brandi Anders

WFBH1 Wake Forest Baptist Health

Background: Chemotherapy-induced nausea and vomiting (CINV) is perceived by patients as a significant adverse event that negatively impacts quality of life. Therefore, it is crucial to control CINV with appropriate antiemetics, especially in patients receiving highly emetogenic chemotherapy in preparation for autologous stem cell transplantation (aSCT). Olanzapine is a second-generation antipsychotic thienobenzodiazepine that has activity at multiple receptors including those with significant antiemetic properties. Data suggest the addition of olanzapine as a four drug regimen is more effective in prevention of CINV than standard triple therapy including a neurokinin 1 antagonist, serotonin receptor antagonist, and dexamethasone. However, these studies focus on single-day regimens or solid tumor malignancies. The purpose of this study is to evaluate the efficacy and safety of a four-drug prophylaxis as compared with triplet prophylaxis in patients undergoing aSCT.

Methodology: The study was an observational, single-center, non-randomized, retrospective chart review. Patients that had undergone an outpatient aSCT between January 1, 2017 through September 15, 2019 were identified from the Wake Forest Baptist Health transplant patient registry. Patients included had a confirmed diagnosis of lymphoma or multiple myeloma and were ages 18 to 69. Patients were grouped based on antiemetic therapy they received: triple regimen or triplet regimen plus olanzapine. The primary outcome was complete response (no escalation of initial regimen, no breakthrough antiemetic use, and no emesis) during the acute period (chemotherapy days). Safety and tolerability of olanzapine in aSCT patients were assessed through reviewing documented QT prolongation during therapy and if discontinuation of olanzapine occurred.

Results: In-progress

Conclusions: In-progress

Objective: Explain the utility of olanzapine as an antiemetic therapy for patients undergoing an autologous hematopoietic cell transplantation.

Self Assessment Question: Does olanzapine, when added to a standard triplet regimen, improve chemotherapy-induced nausea and vomiting outcomes?

Please view presentation here at this YouTube link: https://youtu.be/7OSes_qAjcU

10:15am – 10:30am D **61 - Comparing adverse effects outcomes between a balanced and unbalanced isotonic fluid in a pediatric population"** Room A

Presenters: Paige Eber

Comparing adverse effects between a balanced and unbalanced isotonic fluid in a pediatric population
Paige Eber, Margaret Poisson, Anita Gallay, Alicia Sanchez, Kelley Norris
AUMCP2 Augusta University Medical Center/University of Georgia College of Pharmacy (Pediatrics)
Background: In 2018, the American Academy of Pediatrics released maintenance fluid guidelines recommending pediatric patients receive isotonic fluids, which was a change from the historical practice of using hypotonic fluids. There was no recommendation regarding preferred isotonic fluid in the guidelines, as there is little data to address which fluid is superior in regard to adverse effects. The primary objective of this study was to compare the incidence of hyponatremia between Dextrose 5% - 0.9% Sodium Chloride (D5NS) and Dextrose 5% - Lactated Ringers (D5LR). Secondary objectives examined the differences in hyperchloremic metabolic acidosis and acute kidney injury (AKI) in patients receiving each fluid. Incidence of hypo- or hyperkalemia were also assessed in patients whose maintenance fluid contained potassium additive.
Methodology: This study was a retrospective chart review and included patients less than 18 years of age who received one of D5NS or D5LR for at least 12 continuous hours in the first 72 hours of admission. Baseline basic metabolic panel and at least one follow-up during fluid administration was assessed.
Results: One patient was found to be hyponatremic after fluid administration. Significantly more patients in the D5NS cohort developed hyperchloremic metabolic acidosis after fluid administration but not AKI. There was no significant difference in hypokalemia between patients with potassium added to maintenance fluids versus those without.
Conclusions: There was no clinically significant difference in incidence of hyponatremia. Significantly more patients developed hyperchloremic metabolic acidosis but not AKI. The addition of potassium to maintenance fluids does not have an effect on incidence of potassium level derangements.

Objective: Describe the adverse effects related to isotonic fluids when used as maintenance fluids in a pediatric population.
Self Assessment Question: Are isotonic-balanced fluids superior to isotonic-unbalanced fluids as maintenance fluids in the pediatric population?

Link: https://youtu.be/Tj4GzH1zoks

10:15am – 10:30am T **63 - Impact of pharmacist-led antibiotic discharge service on pneumonia readmission** Room C

Presenters: Carrie Ellison

Impact of pharmacist-led antibiotic discharge service on pneumonia readmission
Carolyn Ellison, Megan Autrey, Natalie Tapley, Kenda Germain, Nathan Pinner
PBMC1 Princeton Baptist Medical Center

Background: Hospital readmissions are costly for health care systems and patients. Pharmacists can play an important role at discharge by providing antibiotic recommendations, patient counseling, and post-discharge phone calls. The purpose of this study is to determine the impact of pharmacist interventions on 30-day pneumonia readmissions in a high-risk population
Methodology: This was a two part study with a retrospective and a prospective component. The retrospective review was to determine baseline readmission rates. The prospective component evaluated the impact of this discharge service on readmission rates. Patients were included if they had diagnosis of pneumonia, at least 1 high-risk factor, and were discharged home with an antibiotic. High-risk factors were defined as concurrent COPD, heart failure, greater than 65 years of age, admission to the hospital within the past 30 days, greater than three admissions in the past year, or greater than ten medications. Charts were reviewed for inclusion and data was collected on demographics, high-risk factors, antibiotic regimen and duration, readmission cause, and time to readmission if applicable. Patients included in the prospective component were reviewed for antibiotic optimization, counseled on antibiotic regimen as time permitted, and contacted via phone within 72 hours of discharge to review antibiotics and confirm pick-up. Charts were reviewed for readmission and readmission reason 30-days post-discharge.
Results: For 30-day readmissions, 24% were readmitted in the retrospective arm while 21% were readmitted in the prospective arm (p=0.12). Of those, 5 were infection related in the retrospective arm and none were in the prospective arm (p=0.001). Approximately half of the patients were intervened on for antibiotic stewardship optimation with the majority of those relating to duration.
Conclusions: There was a numerical reduction in 30-day readmissions that was only statistically significaly for infection related readmissions.

Objective: To describe the effect a pharmacist-led discharge counseling service has on pneumonia readmission rates in a community hospital.
Self Assessment Question: In patients with pneumonia, what is the benefit of a dual discharge intervention that includes antibiotic counseling and 72-hour follow-up call?

https://www.youtube.com/watch?v=vpGLSEj-WpE&feature=youtu.be

10:30am – 10:45am B **74 - Potential Impact of Freestyle Libre Utilization on Hypoglycemia and Hemoglobin A1c in Veterans at the Salisbury Veterans Affairs Health Care System** Room B

Presenters: LISA FELDMANN

Potential Impact of Freestyle Libre Utilization on Hypoglycemia and Hemoglobin A1c in Veterans at the Salisbury Veterans Affairs Health Care System

Lisa Feldmann, Camille Robinette, Nicole Harris, Adriane Morris

SVAM1 Salisbury/W.G. Hefner VA Medical Center

Background: Determine and evaluate potential improvement in glycemic control and safety with use of the Freestyle Libre for Veterans with Type 1 and Type 2 diabetes, in order to possibly improve clinical practice and diabetic outcomes.

Methodology: Eligible subjects are those who are diagnosed with Type 1 or Type 2 diabetes and received initial education and sensor placement of the Freestyle Libre within the time period December 21, 2018 – September 27, 2019. Veterans' charts will be reviewed for changes in hypoglycemia and HgbA1c over a period of one year prior and subsequent to Freestyle Libre utilization. Descriptive statistics will be used for data analysis and will be incorporated into future education for health professionals at the Salisbury Veterans Affairs Health Care System (SVAHCS).

Results: With use of the Freestyle Libre, Veterans reported an increased number of hypoglycemic events at clinic visits. Additionally, use of the Freestyle Libre resulted in Veterans' reduction in HgbA1c, including some Veterans who achieved their goal HgbA1c.

Conclusions: The Freestyle Libre has the potential to improve diabetes management through increased awareness of hypoglycemia and reduction in HgbA1c, if used appropriately. Additionally, the development of a standardized template can improve provider utilization of the Freestyle Libre to better manage diabetes mellitus and educate Veterans.

Objective: Describe potential benefits and impact of using Freestyle Libre to possibly reduce hypoglycemia and improve glycemic control in Veterans with diabetes mellitus.

Self Assessment Question: How can health care professionals utilize CGMs such as the Freestyle Libre to potentially improve diabetes management?

https://www.youtube.com/watch?v=oLzagZ0BCcQ

10:30am – 10:45am B **81 - Comparison of Glycemic Control, Weight Loss and Tolerability Between Exenatide ER, Dulaglutide, and Semaglutide in Patients with Type 2** Room I

Presenters: Shelbie Foster

Comparison of Glycemic Control, Weight Loss and Tolerability Between Exenatide ER, Dulaglutide, and Semaglutide in Patients with Type 2

Foster Shelbie, Cheeley Mary Katherine, May Alexandria, Quairoli Kristi

GMHA1 Grady Memorial Hospital

Background: Patients with T2DM are at an increased risk for cardiovascular disease. The 2019 American Diabetes Association guidelines recommend add-on therapy for patients with T2DM and established ASCVD with an agent with demonstrated cardiovascular benefit, such as a glucagon-like peptide-1 (GLP-1) receptor agonist. GLP-1 agonists are attractive treatment options for patients with T2DM due to their efficacy in improving glycemic control, weight loss, and low risk of hypoglycemia. Data from randomized controlled trials suggests that exenatide extended-release, dulaglutide, and semaglutide agents vary in efficacy and tolerability, however, these agents have never been compared head-to-head.

Methodology: A retrospective chart review of patients with T2DM seen in one of the GHS's primary care clinics was conducted. EPIC data extraction was used to identify patients initiated on exenatide ER, dulaglutide, or semaglutide on or before March 31, 2019. Chart review was completed on 50 patients in the exenatide ER and dulaglutide groups, and 22 patients in the semaglutide group meeting inclusion criteria. Patients were included if they had T2DM, a prescription for exenatide ER, dulaglutide, or semaglutide from a GHS clinic, and at least one documented hemoglobin A1C (HbA1c) 3-6 months after initiation of therapy.

Results: Results showed patients in the semaglutide group with a 27% reduction in HbA1c, and 1.8 and 2 times more weight loss than the exenatide ER and dulaglutide groups respectively.

Conclusions: From the data we concluded that while patients in the semaglutide group saw greater glycemic control and tolerability, more studies will need to be done to further compare these agents.

Objective: Identify comparative glycemic control, body weight reduction, and tolerability between treatment with either exenatide extended-release (ER), dulaglutide, and semaglutide in patients with type 2 diabetes (T2DM) seen at Grady Health System (GHS).

Self Assessment Question: How can pharmacists improve glycemic control through GLP-1 agonist selection?

10:30am – 10:45am C **73 - READMISSION RATES IN PATIENTS WITH ATRIAL FIBRILLATION POST-PCI DISCHARGED ON DOUBLE VS TRIPLE THERAPY** Room A

Presenters: Brittany Fear

READMISSION RATES IN PATIENTS WITH ATRIAL FIBRILLATION POST-PCI DISCHARGED ON DOUBLE VS TRIPLE THERAPY

Brittany Fear, Sanaa Belrhiti, Ryan Kammer

NHF12 Novant Health Forsyth Medical Center (Administration and Leadership with Masters)

Background/Purpose: A large number of patients with atrial fibrillation will also experience a myocardial infarction requiring percutaneous coronary intervention (PCI). Typical treatment after PCI is dual antiplatelet therapy for 12 months, however these patients also need to continue an oral anticoagulant for stroke prevention. Studies such as WOEST, PIONEER-AF, RE-DUAL, and AUGUSTUS have provided evidence of an increased risk of bleeding when using triple therapy (aspirin, P2Y12 inhibitor, and oral anticoagulant), with varying results on risk of thrombosis when aspirin use is excluded (double therapy). While expert opinion recommends discontinuing aspirin immediately following PCI, or continuing for 1 month in patients with high ischemic risk with low risk of bleeding, there is no current standard of practice.

The purpose of this study is to assess readmission rates secondary to bleeding/hemorrhage or ischemic complications among patients with atrial fibrillation discharged from a Novant Health facility on double therapy or triple therapy post-PCI and to trend current prescribing practices of Novant Health providers.

Methods: This multicenter, IRB-approved, retrospective chart review included 443 patients over 18 years of age with a history of atrial fibrillation who underwent PCI between January 2018 and August 2019 at a Novant Health facility, and were discharged on double or triple antithrombotic therapy. Patients were excluded for known thrombophilia or if their readmission was associated with bleeding secondary to trauma such as MVA, though traumatic subarachnoid or subdural hematoma was included. The primary endpoint was readmission for bleeding/hemorrhage. Secondary endpoints included readmission for ischemic complications, percent of patients discharged on double vs triple therapy, oral anticoagulant prescribed, P2Y12 inhibitor prescribed, doses of antithrombotic medications, planned duration of antithrombotic therapy, and type of stent placed (BMS vs DES).

Results: A total of 220 patients met inclusion criteria and were utilized for analysis. Average age was 73 years, 75% were male, and the average serum creatinine was 1.1 mg/dl. 26/220 patients (11.8%) were readmitted for bleeding events and 13/220 patients (5.9%) were readmitted for ischemic events. For the primary endpoint of bleeding readmissions, 15/120 patients were on double therapy (12.5%) and 11/100 patients were on triple therapy (11.0%) (p=0.835). For ischemic readmissions, 6/120 were on double therapy (5.0%) and 7/100 were on triple therapy (7.0%) (p=0.576). 86.8% of patients received a drug-eluting stent. Duration of triple therapy ranged from 3 days to 12 months, with many regimen durations undefined. 54.5% of patients were discharged on double therapy with the other 45.5% discharged on triple therapy. 11/26 patients readmitted for bleeding were on regimens that included ticagrelor (42.3%).

Conclusions: This study found no statistically significant difference in bleeding or ischemic events between patients discharged on double therapy versus triple therapy. Prescribing practices of Novant Health providers varied widely in choice of combination therapy and duration. Avoidance of ticagrelor use in combination with OAC and standardization of aspirin duration may reduce bleeding readmissions and warrant further investigation.

Presentation Objective: By the end of this presentation, participants should be able to describe the risk versus benefit of using double therapy versus triple therapy in patients with a history of atrial fibrillation who have undergone PCI.

Self-Assessment: What is the most common risk associated with using triple antithrombotic therapy?

Please contact Brittany Fear at bsfear@novanthealth.org with any further questions.

10:30am – 10:45am C **83 - Comparative efficacy of dofetilide and sotalol** Room K

Presenters: Josh Francis

Comparative efficacy of dofetilide and sotalol

Josh Francis, Michael J. Scalese, Rodel Bobadilla

PHRC2 Palmetto Health Richland (Cardiology)

Background: Determine if a difference in maintenance time of normal sinus rhythm following direct current cardioversion (DCCV) is seen between individuals treated with dofetilide or sotalol. There is currently no data supporting greater efficacy with either agent in comparison for maintenance of normal sinus rhythm.

Methodology: This was a single center, retrospective chart review of patients admitted to Prisma Health Richland between October 1st, 2017 and August 1st, 2019. To be included in the study, patients had to be ≥18 years of age, received DCCV during their index hospitalization, and discharged on either dofetilide or sotalol. Patients were excluded if they received an ablation during study period or within six months of admission, were pregnant, or incarcerated. Patients were followed for 6 months following date of DCCV for recurrence of atrial arrhythmia as well as discontinuation due to safety parameters of either drug. All analyses were completed using Cox Proportional-Hazards Regression, t-tests, and Fisher's exact test.

Results: In Progress

Conclusions: In Progress

Objective: Describe the comparative efficacy between dofetilide and sotalol in the maintenance of normal sinus rhythm following direct current cardioversion.

Self Assessment Question: What is the most significant confounding factor that limits the ability to distinguish superiority between dofetilide and sotalol?

Progressive intervention(s) to resolve arrhythmias within six months following DCCV that may either convert a recurrent arrhythmia or temporary promote arrhythmias.

10:30am – 10:45am R **76 - Use of thrombolytics for in-hospital and out-of-hospital cardiac arrest secondary to presumed or confirmed pulmonary embolism** Room D

Presenters: Kara Fifer

Use of thrombolytics for in-hospital and out-of-hospital cardiac arrest secondary to presumed or confirmed pulmonary embolism

Kara Fifer, John Patka, Shauntrell Johnson, Vivian Liao

GMHE2 Grady Memorial Hospital (Emergency Medicine)

Background: Cardiac arrest secondary to pulmonary embolism (PE) is associated with a high mortality rate, reported up to 95%. Quality improvement data at Grady Memorial Hospital shows that 50% of these patients achieve return of spontaneous circulation (ROSC). The objective of this study was to review and assess mortality rate of patients who received alteplase in cardiac arrest for presumed or confirmed PE at a large academic medical center.

Methodology: This single-center, descriptive, retrospective chart review assessed all patients who received intravenous alteplase during cardiac arrest from January 1, 2012 through August 31, 2019. Any patient 18 years or older who received alteplase during cardiac arrest prior to obtaining ROSC was considered for inclusion. Patients were excluded if ROSC was obtained prior to alteplase administration or if alteplase was administered for any other reason than presumed or confirmed PE.

Results: Of 139 patients, 42 were included in the final analysis. Twenty-three patients had an out-of-hospital cardiac arrest, and 19 were witnessed in-hospital. Of the included patients, 21 (50%) achieved ROSC, 24 (14%) survived to hospital admission, and none survived to hospital discharge. The median time to alteplase administration was 22 minutes after initiation of cardiopulmonary resuscitation (CPR). A dose of 100mg alteplase as an intravenous push during active CPR was given in 86% of patients.

Conclusions: None of the patients who received alteplase in cardiac arrest for presumed or confirmed PE survived until hospital discharge. Further research with prospective trials should be completed to assess the mortality benefit and effects of time to thrombolytic administration in these patients.

Objective: Evaluate the association of return of spontaneous circulation and survival in patients with presumed or confirmed pulmonary embolism receiving thrombolytic therapy

Self Assessment Question: Does thrombolytic therapy improve survival outcomes in patients in cardiac arrest secondary to presumed or confirmed pulmonary embolism?

10:30am – 10:45am R **77 - Topical capsaicin for the treatment of cannabinoid hyperemesis syndrome** Room E

Presenters: Patrick Filkins

Topical capsaicin for the treatment of cannabinoid hyperemesis syndrome
Patrick Filkins, Ted Walton, Kristina Evans, Jared Cavanaugh, Ziad Kazzi
GMHE2 Grady Memorial Hospital (Emergency Medicine)
Background: Cannabinoid hyperemesis syndrome (CHS) is characterized as cyclic vomiting associated with frequent heavy cannabis use. CHS has increasingly been reported with the spreading legality and rising potency of cannabis. Currently, the only definitive treatment for CHS is cessation of cannabis use. Management of CHS upon presentation has not been well characterized in the literature. Capsaicin represents a relatively inexpensive but untested therapy. It is thought to work via agonism of the transient receptor potential vanilloid 1 (TRPV1). Further investigation into the optimal therapy for these patients is warranted to improve emergency department (ED) throughput time, decrease resource burden, and avoid unnecessary exposure to polypharmacy.
Methodology: A retrospective cohort study of 81 patients presenting to the ED with a diagnosis of cannabinoid hyperemesis syndrome. The primary outcome measured was ED throughput time defined as the time of presentation until the time of discharge or hospital admission. Throughput time was compared between patients receiving capsaicin plus other therapies and those only receiving other therapies. Secondary outcomes included the site of capsaicin administration, number of applications, characterization of other therapies, 90-day readmission rate for CHS, and the oral morphine milligram equivalents used.
Results: There was no significant difference in the primary outcome of ED throughput time between patients receiving capsaicin and those who did not (526 minutes vs. 455 minutes p=0.33). Patients who received capsaicin on discharged were less likely to be readmitted within 90 days (11.8% vs. 45.3%). A median of 0 mg (IQR 0-8.625) oral morphine equivalents were administered to patients who received capsaicin versus 6 mg (IQR 0-12) administered to patients who did not receive capsaicin.
Conclusions: Capsaicin does not appear to decrease ECC throughput time, however capsaicin may be opioid sparing and prevent readmissions.
Objective: Evaluate the efficacy of capsaicin in the treatment of cannabinoid hyperemesis syndrome
Self Assessment Question: What are the therapeutic benefits of capsaicin use in CHS?

10:30am – 10:45am R **79 - Incidence of one-time intravenous antibiotic prescribing before and after SEP-1 compliance in a community teaching emergency department** Room G

Presenters: Robin Fischer

Incidence of one-time intravenous antibiotic prescribing before and after SEP-1 compliance in a community teaching emergency department
Robin Fischer, Steven Robinette, Michael Thiefault, Jenna Swindler
MRMC1 McLeod Regional Medical Center
Background: Sepsis is a leading cause of morbidity, death and hospital expenses. Sepsis CMS Core Measure (SEP-1) has been adopted by Centers for Medicare and Medicaid as a treatment bundle for patients with severe sepsis or septic shock with reimbursement tied to compliance. Bundle compliance requires antibiotic administration within three hours of the patient's presentation. Inadvertent intravenous (IV) antibiotic prescribing to lower acuity patients could lead to complications. This study aims to determine the incidence of one-time IV antibiotic prescribing to patients who were discharged from McLeod Regional Medical Center (MRMC) emergency department (ED) pre- and post- implementation of attempted SEP-1 compliance.
Methodology: Eligible patients are those $\geq$ 18 years who presented to MRMC emergency department between July 2014 through July 2015 (pre-SEP-1) and July 2017 through July 2018 (post-SEP-1), who received an antibiotic prior to being discharged home or to a nursing facility. Exclusion criteria included patients with long term IV access and patients being treated for provider documented pyelonephritis.
Results: One hundred and twenty patients were included in the IRB-approved study. Sixty patients were evaluated in the pre-SEP-1 group in which 37 patients (60%) received oral antibiotics, 20 patients (33.3%) received IV antibiotics and four patients (6.7%) received both. Sixty patients were evaluated in the post-SEP-1 group in which 19 patients (31.7%) received oral antibiotics, 40 patients (66.7%) received IV antibiotics and one patient (1.7%) received both.
Conclusions: Preliminary analysis of the pre- and post-SEP-1 implementation groups shows a doubling of IV antibiotic utilization between groups. Further analysis will assess confounders. Future studies could attempt to replicate this finding with an increased sample size or data from multiple practice sites.
Objective: Explain how implementation of SEP-1 compliance has changed the intravenous antibiotic prescribing practices at MRMC.
Self Assessment Question: What are some complications associated with IV antibiotics?
https://www.youtube.com/watch?v=9jt9M2prdoE

10:30am – 10:45am R **84 - Identifying Risk Factors of Inadequate Anti-Xa Levels for Venous Thromboembolism Prophylaxis in the Trauma and Burn Population** Room L

Presenters: Morgan Frawley

Identifying Risk Factors of Inadequate Anti-Xa Levels for Venous Thromboembolism Prophylaxis in the Trauma and Burn Population

Morgan Frawley, Doug Wylie, Tyson Kilpatrick
UAHC2 University of Alabama at Birmingham Hospital (Critical Care)

Background: Venous thromboembolism (VTE) is a common complication of the trauma and burn patient population. Pharmacologic interventions are routinely prescribed to reduce the risk of developing a VTE, with enoxaparin being the most commonly prescribed agent. Based on evolving literature, the optimal dosing scheme for these patients has changed over the last few decades. Our institution has recently changed our dosing practices based on such literature, as well as a quality improvement project performed on our specific patient population. However, we still have many patients whose anti-Xa levels fall outside of the desired range. The purpose of this study is to identify risk factors of the trauma/burn patient that may predict anti-Xa trough levels outside of the desired range for VTE prophylaxis, in an effort to reduce time to appropriate enoxaparin doses and decrease the risk of VTE in these patients.

Methodology: This study is a single center, retrospective review including patients admitted to the trauma or burn service that were started on enoxaparin for VTE prophylaxis utilizing our institution's new dosing strategy and had an anti-Xa trough level obtained appropriately. Patients were excluded if their anti-Xa level was obtained inappropriately, if they were receiving enoxaparin for indications other than VTE prophylaxis, if they were not receiving twice daily enoxaparin, or if they were less than 18 years of age.

Results: In Progress

Conclusions: In Progress

Objective: Describe the risk factors of inadequate anti-Xa trough levels for venous thromboembolism (VTE) prophylaxis in the trauma and burn population

Self Assessment Question: Which of the following is a risk factor associated with sub-prophylactic anti-Xa trough levels in the trauma and burn patient population?

10:30am – 10:45am | **78 - IMPACT OF EDUCATION AND DATA FEEDBACK INTERVENTIONS ON ANTIBIOTIC PRESCRIBING FOR URINARY TRACT INFECTIONS IN THE EMERGENCY DEPARTMENT** Room F

Presenters: Kristen Fischer

IMPACT OF EDUCATION AND DATA FEEDBACK INTERVENTIONS ON ANTIBIOTIC PRESCRIBING FOR URINARY TRACT INFECTIONS IN THE EMERGENCY DEPARTMENT

Kristen Fischer, J Funaro, J Mando-Vandrick, J Shroba, J Boreyko, R Wrenn
DUHD1 Duke University Hospital

Background: An estimated 3 million emergency department (ED) visits for urinary tract infections (UTI) occur annually in the United States. Over 47 million unnecessary antibiotic prescriptions are written in doctors' offices and EDs annually. Emerging antibiotic resistance and regulatory standards require an increased focus on antimicrobial stewardship (AS) in these settings.
Methodology: We conducted a prospective evaluation of an AS intervention outlining appropriate UTI diagnosis and management with data feedback in one academic and two community EDs. The primary outcome was the rate of guideline concordant antibiotics for UTIs. Guidelines were created from analysis of ED specific antibiograms. Secondary aims included: change in median duration of therapy, number of UTI diagnoses, percentage of patients to whom the guidelines apply, and instances of treatment failure or antibiotic adverse events. Eligible patients included adults that were evaluated in the ED, prescribed an antibiotic and diagnosed with acute cystitis or pyelonephritis between Nov. 2018 and May 2020. Patients were excluded if they required admission to an inpatient ward or observation unit.
Results: The primary outcome was assessed using an interrupted time series analysis with time points at 2-week intervals both pre- and post-intervention. Baseline data consisted of 3,517 community encounters and 1,304 academic encounters over 12 months pre-intervention. The first post-intervention analysis included 8 weeks and 526 encounters in the community EDs and 182 in the academic ED. The second analysis included the following 4 weeks and 254 encounters in the community EDs and 83 encounters in the academic ED. Summative guideline concordance increased from 42% to 47% to 50% at each interim analysis. The number of UTI diagnoses decreased. Additional endpoints are currently being analyzed.
Conclusions: Preliminary data indicates that an AS intervention in the ED can improve guideline directed antibiotic prescribing.
Objective: Describe the methodology and quantify the impact of an AS intervention and data feedback on the rate of guideline prescribing for UTIs in the ED.
Self Assessment Question: Which of the following scenarios represent an appropriate platform for an AS intervention?

10:30am – 10:45am | **82 - Hematologic Adverse Effects with Prolonged Cephalosporin Use** Room J

Presenters: Bailey Francis

Prolonged Cephalosporin Use and Hematologic Adverse Events

Bailey Francis, Bria Benson, Lacie McKamey, Sarah Green
NHFM1 Novant Health Forsyth Medical Center

Background: Hematologic effects have been documented with cephalosporin therapy, but the time course of delayed events is less documented in available literature. Post-marketing data for ceftaroline revealed adverse events similar to other cephalosporins with a 5-20% risk of neutropenia with long-term ceftaroline therapy. Hematologic events with cephalosporins may be associated with extended durations of therapy in the treatment of deep-seated infections. This study aimed to describe and compare the incidence and time course of cephalosporin-associated hematologic adverse events. Data collected from this research was utilized to assess the need for additional long-term monitoring, and to optimize antimicrobial management in select high-risk patient populations.

Methodology: This institutional review board approved, retrospective chart review included patients at three Novant Health Medical Centers. Patients treated for a minimum of 7 days with cefazolin, ceftriaxone, or ceftaroline for an indication of endocarditis, septic arthritis, osteomyelitis, or bacteremia were assessed for inclusion. The primary outcome was the incidence and time course of any hematologic event. Secondary outcomes included the incidence and time course of thrombocytopenia, leukopenia, neutropenia, and the rate of drug discontinuation due to hematologic adverse events.

Results: For the primary outcome of any hematologic event, 18/97 (18.6%) patients on cefazolin, 15/121 (12.3%) of patients on ceftriaxone, and 12/37 patients (32.4%) on ceftaroline therapy experienced any hematologic event, with a significant difference found between the ceftriaxone and ceftaroline groups ($p<0.001$). Thrombocytopenia was noted to occur at earlier time points during therapy, followed by leukopenia and then neutropenia with all three of the study agents. Events were observed to occur earlier in the treatment course with ceftaroline, however, there were no statistically significant differences identified in time to event between the three agents in the primary or secondary outcomes.

Conclusions: Hematologic adverse effects were observed to more frequently in patients receiving ceftaroline compared to cefazolin or ceftriaxone. Despite not reaching statistical significance, a longer time to event was noted for cefazolin and ceftriaxone. Continued laboratory monitoring should be recommend to monitor for potential delayed hematologic adverse events. The variability in timing and severity of the events may warrant more frequent monitoring than weekly labs with prolonged treatment courses.

Objective: To describe the incidence and time course of cephalosporin associated hematologic adverse events.

Self Assessment Question: When are cephalosporin-induced hematologic adverse events most likely to occur?

Link to Presentation Recording:
https://www.youtube.com/watch?v=sS3rPjmW5_A

10:30am – 10:45am O **75 - Efficacy and Safety Outcomes in Patients Treated for High Grade B-Cell and Double Expressor Lymphoma at a Single Center** Room C

Presenters: Alana Ferrari

Efficacy and Safety Outcomes in Patients Treated for High Grade B-Cell and Double Expressor Lymphoma at a Single Center

Alana Ferrari; Jordan Baskett; Meredith Moorman
DUHO2 Duke University Hospital (Oncology)

Background: High grade B cell lymphomas (HGBLs) including double hit, triple hit, and HGBL, not otherwise specified and double expressor lymphoma are associated with aggressive disease and poor prognosis. Standard of care induction regimens for these diseases are not established. Retrospective studies have demonstrated improved progression free survival with intensive induction regimens of rituximab plus etoposide, prednisone, vincristine, cyclophosphamide, and doxorubicin (R-EPOCH) and dose-adjusted R-EPOCH. However, studies assessing patients initiated on alternative induction regimens are lacking. This study evaluates the efficacy and safety of induction regimens chosen to treat HGBLs and double expressor lymphoma at Duke University Medical Center (DUMC).

Methodology: This single-center, retrospective, observational study evaluates all adults who received an induction regimen for HGBL or double expressor lymphoma between January 1, 2006 and April 15, 2019. Primary CNS lymphoma, HIV-positive serostatus, and pediatric patients were excluded. The primary objective assesses the composite efficacy outcome of time to treatment failure or consolidation with hematopoietic stem cell transplant (HCT). Secondary objectives include characterization of reasons for treatment failure, percent of patients requiring a second treatment, median time to next treatment, percent of patients achieving radiographic complete response, percent of patients achieving consolidation with hematopoietic stem cell transplant, and rates of adverse effects.

Results: In this preliminary analysis, median time to treatment failure or consolidation with HCT was 138 days with 17/29 (59%) requring seond line therapies and 6/29 (21%) achieving HCT. First line regimens were well tolerated and only to regimen changes in 3/29 patients (10%). Of those requiring seond line therapies, primary disease relapse was the predominant reason (35%). Second line therapies were variable and chosen based on patient-specific factors and previous chemotherapy exposure.

Conclusions: Overall, the median time to next treatment was only 138 days with the majority of patients initiated on the less intense regimens and required second line therapies due to primary disease relapse. Data was limited by few patients eligible for inclusion as well as pathology diagnostic criteria for defining HGBL and DEL that changed over the 13 years patients were assessed. Final data analysis will allow for a more comprehensive interpretation of how primary therapies chosen affect the need for secondary treatment, rates of CR, orconsolidation with HCT.

Presentation Recording: https://youtu.be/o-2gD9WHgXA

Objective: Describe the challenges in studying efficacy of induction regimens in patients with HGBL and double expressor lymphoma.

Self Assessment Question: Based on the current literature, which therapies should be considered for induction regimens in patients with HGBL and double expressor lymphoma?

10:45am – 11:00am B **85 - Assessment of the Number and Cost of Hospital Visits in COPD and Asthma Patients Before and After Patient Assistance Program Enrollment** Room A

Presenters: Brooke Gallman

Assessment of the Number and Cost of Hospital Visits in COPD and Asthma Patients Before and After Patient Assistance Program Enrollment
Brooke Gallman, Marianne Ray, Whitney Huddleston, Susan Smith
PMAR1 Piedmont Athens Regional
Background: Patient Assistance Programs (PAPs) are available to uninsured patients to obtain high cost medications for chronic disease states. PAPs can increase adherence and reduce costs for patients; however, there is a lack of literature assessing PAPs efficacy. Non-adherence to chronic medication regimens has created a large burden for healthcare systems. The purpose of this study is to evaluate the impact of PAP enrollment on healthcare utilization in patients with asthma or COPD.
Methodology: This was an IRB-exempt retrospective, observational cohort study of patients approved for PAPs to manage asthma or COPD at Piedmont Athens Regional Community Care Clinic from January 2018 to March 2019. The primary outcomes were the number of ED visits and hospitalizations six months after PAP enrollment compared to six months before enrollment. Therefore, the total time period of data collection ranged from July 2017 to September 2019. Secondary outcomes were the estimated ED and hospitalization costs before and after PAP enrollment. EMRs were utilized to determine PAP enrollment date and hospital encounters within the specified time. Financial records were provided through Piedmont Health System billing records.
Results: In patients who had at least one hospital encounter during the specified period, total ED visits decreased from 54 to 7 (median [IQR] visits per patient 1 [1-2] vs 0 [0-0], $p<0.001$) and total hospitalizations decreased from 13 to 0 (median visits per patient 0 [0-1] vs 0 [0-0], $p=0.001$). Median amount owed by patient to hospital decreased from $4683 to $0 ($p<0.001$) and average total hospital acquisition cost decreased from $351 to $0 ($p=0.002$).
Conclusions: PAPs lead to decreased utilization of acute healthcare services. Additionally, this leads to costs savings for patients and healthcare systems.
Objective: Understand the impact of PAPs enrollment on healthcare utilization in patients with asthma or COPD.
Self Assessment Question: Do PAPs have the potential to lower acute health care utilization?
Video Link: https://www.youtube.com/watch?v=kbceALkipNQ&feature=youtu.be

10:45am – 11:00am B **91 - Increasing vaccination rates among female veterans** Room G

Presenters: Christine Goertz

Increasing vaccination rates among female veterans
Christine Goertz, Lisa Ambrose, Kanini Rodney
BVAM1 Brimingham VA Medical Center
Background: According to the CDC, during the 2017-2018 flu season, vaccinations prevented approximately 7 million influenza cases, 109,000 flu-related hospitalizations and 8,000 influenza deaths. Concurrently, the CDC states that every year pneumonia causes about 1 million hospitalizations and about 50,000 deaths within the United States. Our women's health clinic has significantly lower influenza and pneumonia vaccination rates compared to other women's health clinics within the VISN.
Methodology: A campaign letter addressing common misconceptions and accessibility to vaccines will be mailed to all patients within the women's health clinic at the BVAMC. To provide encouragement for patient's to seek immunization, there will be little to no wait times at the clinic for these shots to be administered. Vaccinations will also be available at community events such as the breast cancer event held in October. The rates of influenza vaccinations will be in relation to all women's health clinic patients. Pneumonia vaccinations will only be provided to those who meet CDC recommendations including those who are sixty-five years of age or older or patients with certain health conditions that increase risk. These health conditions include, but are not limited to, diabetes, kidney disease, smoking, COPD, asthma, and pregnancy. If a patient is unvaccinated and indicated to receive both the Pneumovax 23 and Prevnar 13, one vaccination must be given within the 2019-2020 flu season in order to be considered vaccinated for the purposes of this study. The rates of pneumonia vaccinations will only be compared to patients who were eligible to receive the vaccination starting last year (2018-2019). To determine the effects of increased patient knowledge and accessibility of vaccinations, previous year’s vaccination rates will be compared to 2018-2019 session following the interventions.
Results: In progress
Conclusions: In progress
Objective: Identify techniques to increase vaccination rates among female veterans.
Self Assessment Question: Can a practice site increase vaccination rates by addressing common misconceptions regarding vaccinations, providing easier access, and educating staff to offer vaccines?

10:45am – 11:00am C **86 - The Evaluation of Appropriateness of Direct-Acting Oral Anticoagulant Dose Reductions in Patients Admitted to Spartanburg Medical Center** Room B

Presenters: Kennedy Gambill

Evaluation of Appropriateness of Direct-Acting Oral Anticoagulant Dose Reductions

Kennedy Gambill, Stefanie Sarratt, Alex McDonald, and Karen Bryson
SBMC1 Spartanburg Medical Center

Background: There has been an increase in recent DOAC use for the prevention and treatment of deep vein thrombosis, pulmonary embolism, and atrial fibrillation. Dose reductions for renal function for apixaban, dabigatran, edoxaban, and rivaroxaban are drug-specific and differ depending on indication of therapy. Failure to dose adjust appropriately as well as off-label dosing can lead to increased incidence of related adverse effects.

Methodology: A retrospective, single center, observational chart review was performed on all patients meeting inclusion criteria from January 1, 2019 through July 31, 2019. All data points collected were extracted from the patient's electronic medical record during the time of their admission. A total of 170 patients were sampled with 156 being enrolled and 14 being excluded due to active malignancy.

Results: A Chi-squared test and descriptive statistics were used for research analysis of the primary endpoint. For the primary endpoint, inappropriate dosing occurred in 59.6% of initial DOAC orders ($p < 0.0001$). The SMC pharmacy team was able to intervene and correct 50.5% of the inappropriate DOAC orders.

Conclusions: Overall, we observed that 59.6% of DOACs ordered had an inappropriate dose reduction. Multiple factors may contribute to inappropriately dose reduced DOAC therapy such as complicated dosing schemes including renal function, weight, age, indication, and use of total body weight for calculating creatinine clearance. Re-education with our SMC providers and pharmacists on DOAC dose reductions is warranted.

Objective: Describe the percentage of patients admitted to SMC that were on an inappropriately reduced dose of apixaban, dabigatran, edoxaban, or rivaroxaban based on FDA-approved indications.

Self Assessment Question: Based on the number of patients receiving DOAC therapy for an FDA-approved indication at a single site, are inappropriate dose reductions occurring frequently?

Presentation link: https://youtu.be/5AB7qbpuTr8

10:45am – 11:00am R **87 - Implementation of Evidence-based Ketamine Protocols in the Emergency Department and Intensive Care Unit at a Community Hospital** Room C

Presenters: Sarah Garvin

Implementation of Evidence-based Ketamine Protocols in the Emergency Department and Intensive Care Unit at a Community Hospital

Sarah Garvin, Sarah Murphy, Megan Freeman
NHAG1 Northside Hospital

Background: Despite the fact that ketamine is not a new therapy, its array of uses is ever expanding. Due to the growth of indications, this project aims to assess current practices with ketamine. ED use for analgesia and refractory anxiety/agitation as well as ICU use as a continuous infusion for analgosedation will be evaluated to guide the most effective implementation of evidence-based protocols.

Methodology: A retrospective chart review was performed on patients receiving ketamine for analgesia or refractory anxiety/agitation in the ED and as a continuous infusion in the ICU. Data was analyzed for dosing, monitoring, safety, and outcomes. Data will be compared to use in patients post protocol implementation. Evidence-based protocols will be evaluated for patient safety and clinical efficacy.

Results: Primary use of ketamine in the ED prior to protocol implementation was for moderate sedation rather than use for analgesia or anxiety/agitation. Thirty-five patients received ketamine as a continuous infusion in the ICU during 2019. Ketamine infusion dosing ranged from 1 to 40 mcg/kg/min, with a mean maintenance dose of 8.8 mcg/kg/min. The length of ketamine infusion days ranged from 1 to 12 days, with a mean of 5 days of therapy. All patients were receiving other analgesic or sedative infusions concomitantly with ketamine [dexmedetomidine (19), fentanyl (22), hydromorphone (3), lorazepam (2), midazolam (11), propofol (17)].

Conclusions: Pre-implementation data revealed no use of ketamine for analgesia and anxiety/agitation in the ED and relatively low use of ketamine in the ICU. Ketamine use is expected to increase upon implementation of evidence-based protocols.

Objective: Explain the role of ketamine in analgesia and refractory anxiety/agitation in the emergency department (ED) and as a continuous nurse-titrated infusion for analgosedation in the intensive care unit (ICU).

Self Assessment Question: In what patient populations is ketamine most appropriate?

Presentation Link: https://youtu.be/G7Q_Y1OMMd8

10:45am – 11:00am R **92 - Impact of a Nurse-Driven Electrolyte Replacement Protocol for Intensive Care Unit Patients**

Presenters: Hannah Green Room H

Impact of a Nurse-Driven Electrolyte Replacement Protocol for Intensive Care Unit Patients
Hannah Green, Megan Lail, Lizzy Robinette, Jenna Swindler
MRMC1 McLeod Regional Medical Center
Background: To evaluate an electrolyte replacement protocol (ERP) in the intensive care unit (ICU).
Methodology: Eligible participants were ≥18 years of age located in the ICU with an order for the ERP. Phase 1 of the study included collecting data retrospectively over a six-week period from patients meeting inclusion criteria. Five patients were randomized daily and added to the data collection spreadsheet with a goal of 150 patients. Phase 2 of the study is planned but not yet underway.
Results: Ninety-six patients were included in the IRB-approved study with 54 patients meeting exclusion criteria. The protocol was followed in 63 patients receiving potassium and 46 patients receiving magnesium. Normal serum concentrations resulted 44% (28/63) of the time in the potassium group and 76% (35/46) of the time in the magnesium group. For those below range in both groups, it took an average of 3 replacements to achieve serum concentrations within the normal range. Provider intervention for those below range occurred 32.4% (11/34) of the time in the potassium group and 71.4% (5/7) of the time in the magnesium group. It took an average of 5 hours to replace calcium and 8 hours to replace phosphorous from the time of the lab result.
Conclusions: Over half of the patients had below normal serum concentrations after receiving the recommended potassium replacement per the current ERP. Magnesium replacement with the protocol resulted in normal concentrations in most patients. An effective ERP should achieve normal serum concentrations following one replacement and replacement should be prompt. Based on the results, there is an opportunity to strengthen our ERP. The protocol should be modified and retrospectively evaluated for effectiveness and safety.
Objective: At the conclusion of my presentation the participant will be able to describe a nurse-driven electrolyte replacement protocol.
Self Assessment Question: What is one goal of utilizing a nurse-driven electrolyte replacement protocol?
https://www.youtube.com/watch?v=ZqHuBB84bR4

10:45am – 11:00am I **90 - Nafcillin versus cefazolin for the treatment of methicillin-susceptible Staphylococcus aureus bacteremia** Room F

Presenters: Taylor Gish

Nafcillin versus cefazolin for the treatment of methicillin-susceptible Staphylococcus aureus bacteremia
Taylor Gish, Jarett Worden, Chris Larkin
STWH1 St. Thomas West Hospital
Background: 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.
Methodology: 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%) vs 20%; 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%) experienced hypokalemia, whereas no patients in the cefazolin group experienced hypokalemia (p=0.007).
Conclusions: 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.
Objective: Compare patient outcomes between patients receiving nafcillin or cefazolin for the treatment of MSSA bacteremia.
Self Assessment Question: How do patient outcomes compare when using nafcillin or cefazolin to treat MSSA bacteremia?

Video link: https://youtu.be/xjayuI2VsUA

10:45am – 11:00am I **96 - An assessment of new-onset diabetes and metabolic effects associated with integrase inhibitor-based antiretroviral therapy** Room L

Presenters: Zachary Gruss

An assessment of new-onset diabetes and metabolic effects associated with integrase inhibitor-based antiretroviral therapy

Zachary Gruss, Tyler Stone, Caryn Morse, John Williamson
WFBH1 Wake Forest Baptist Health

Background: Integrase inhibitor (INSTI)-based antiretroviral regimens are recommended as first-line therapies for HIV infection by the US Department of Health and Human Services. Recent investigations have identified an association between INSTIs and weight gain. The American Diabetes Association recognizes weight gain as a risk factor for diabetes mellitus (DM). The primary objective of this study is to assess the risk of new-onset DM attributable to INSTI-based antiretroviral therapy. The secondary objective is to compare the risk of metabolic adverse effects associated with INSTI-based therapy versus other antiretroviral regimens.
Methodology: This study was a retrospective, observational, single-center cohort study at an academic tertiary care medical center. Adult patients at least eighteen years of age with a confirmed diagnosis of HIV infection receiving care at the Wake Forest Baptist Medical Center Infectious Diseases Clinic between January 2004 and July 2019, and were prescribed the same antiretroviral regimen for at least six consecutive months were included. Patients were excluded if they had a diagnosis of DM or pre-DM prior to the start of antiretroviral therapy; were receiving a medication known to cause or treat hyperglycemia, DM, insulin resistance, or impaired glucose metabolism; had no pre-treatment laboratory assessment; or were pregnant during antiretroviral exposure. Unique antiretroviral regimens prescribed per patient were considered “exposures” and individual patients could represent more than one exposure. The electronic medical record was reviewed to collect data associated with each exposure, up to a maximum of 2 years’ duration. The primary outcome was new-onset DM. Other metabolic outcomes were recorded, including dyslipidemia, liver function test abnormalities, and obesity. Different antiretroviral regimens were compared with regard to all outcome measures.
Results: In Progress
Conclusions: In Progress
Objective: Describe the risk of new-onset DM associated with INSTIs compared to other antiretroviral regimens.
Self Assessment Question: Do INSTI-based antiretroviral regimens increase the risk of new-onset diabetes?

Presentation Youtube Link: https://youtu.be/Tv-ytPlXpIE

10:45am – 11:00am L **95 - Evaluation of a facility-wide weight-based indication-specific heparin dosing protocol** Room K

Presenters: Cydney Grimsley

Evaluation of a facility-wide weight-based indication-specific heparin dosing protocol

Cydney Grimsley, Michael Saavedra
PRHS1 Parkridge Health System

Background: Intravenous (IV) unfractionated heparin (UFH) is a mainstay for inpatient anticoagulation however, pharmacodynamic variability warrants the use of protocols to facilitate monitoring and dose adjustments. A medication use evaluation (MUE) conducted January-March 2019 evaluated an IV UFH protocol with dosing recommendations based on a patient’s ideal, actual, or adjusted bodyweight. Results led to implementation of a new actual weight-based UFH protocol with more conservative dose limits. This study compared the effectiveness and time to therapeutic anticoagulation (TTA) between protocols.
Methodology: A retrospective, multi-center, observational study was conducted at two community hospitals between January and December 2019. Patients were included if administered IV UFH according to facility protocol and excluded if age less than 18 years or pregnant. Primary outcome measured was TTA, defined as activated partial thromboplastin time (aPTT) 1.5-2.5 times baseline. Secondary outcomes included time within therapeutic window and safety assessments. Data was analyzed using Chi-Squared and Mann-Whitney U tests.
Results: 73 patients were included, 25 treated with the old and 48 treated with the new UFH protocol. Comparatively, baseline characteristics were similar overall with the exception of dosing weight (73:84 kilograms, p=0.016). TTA favored the new UFH protocol (6:12 hours, p=0.177). Therapeutic aPPTs (67:67 percent, p=0.568), UFH re-boluses (0:1, p=0.880) and UFH rate decreases (1:1, p=0.822) were similar between treatment groups. Baseline aPPTs drawn (64:100 percent, p=0.001) changed significantly. Acute coronary syndrome (ACS) was the most reported indication for UFH use. No safety events were reported in either group.
Conclusions: While statistical significance was not achieved, TTA favored the new protocol. Differences in dosing weight can be attributed to strict use of actual bodyweight with the new UFH protocol. Baseline lab draws improved significantly with the addition of reflex lab orders.
Objective: Evaluate patient outcomes post-implementation of a new facility-wide UFH dosing protocol.
Self Assessment Question: What bodyweight is recommended for UFH dosing?

10:45am – 11:00am O **88 - A Pre- and Post-Implementation Evaluation of a 90-Minute Rituximab Infusion Protocol**

Presenters: Reem M Ghandour Room D

A Pre- and Post-Implementation Evaluation of a 90-Minute Rituximab Infusion Protocol
Reem M Ghandour, Tushar K. Patel, Sherry Martin
PCRM1 Piedmont Columbus Regional Midtown

Background: Assess the risk of Infusion Related Reactions (IRR) with the 90-minute rituximab infusion protocol in patients with oncological malignancies at our institution.

Methodology: A retrospective chart review was conducted for all patients 18 years and older receiving rituximab at our institution from January 1, 2019 to March 1, 2020. Patients were included if the following criteria were met: receiving non-initial rituximab infusions for oncological malignancies, < 5,000/mm3 malignant lymphocytic cells, and no pre-existing cardiac conditions. The primary endpoint was the percentage of patients who developed grade 3 or 4 IRR with the rituximab conventional infusion vs. 90-minute infusion arms. Secondary endpoints included the percentage of patients who developed grade 1 and 2 IRR after receiving rituximab infusion, mean infusion time, and percentage of nurse adherence to the IRR protocol in patients who experienced a reaction.

Results: 85 patients were included in the conventional infusion arm and 11 patients were included in the 90-minute infusion arm. For the primary endpoint, there were no grade 3 or 4 IRR in either arm. Grade 1 or 2 IRR occurred in 6% of patients (n=5) using conventional infusion vs. 0% for the 90-minute infusion (p=0.571). Nursing adherence to the IRR protocol in patients who developed a reaction was 80%. The mean conventional infusion time was 163.5 minutes vs 91.32 minutes for 90-minute infusion.

Conclusions: The study demonstrated no significant difference in grades 1-2 IRR and 3-4 IRR in patients who received the 90-minute rituximab. The 90-minute protocol reduced chair time by 72.18 minutes on average (44% less chair time) without increasing the risk of IRR.

Objective: Assess the risk of IRR with the 90-minute rituximab infusion protocol for patients with oncological malignancies
Self Assessment Question: Which of the following benefits were observed with the 90-minute rituximab infusion?

Link to presentation: https://youtu.be/v_t1NnZGZqM

10:45am – 11:00am O **89 - Evaluation of prophylactic antifungal therapy use in acute myeloid leukemia patients receiving induction chemotherapy** Room E

Presenters: Betsy Gillenwater

Evaluation of prophylactic antifungal therapy use in acute myeloid leukemia patients receiving induction chemotherapy

Betsy Gillenwater, Ryan Hoffman, Eric Shaw
MHUM1 Memorial Health University Medical Center

Background: Acute myeloid leukemia (AML) is a hematologic malignancy that originates in the bone marrow. Patients with AML are considered at a high-risk (>5%) for developing invasive fungal infections secondary to an intense chemotherapy regimen and prolonged neutropenia (ANC <1000cells/mm3). Current guidelines recommend the use of oral triazole antifungals or parenteral echinocandins as primary prophylaxis. More specifically, a mold-active triazole is recommended when the risk of invasive aspergillosis is >6%. Patients with AML are considered high-risk, warranting treatment with a mold-active triazole. Antifungal prophylaxis is recommended until resolution of neutropenia (ANC >1000).

Methodology: This was a single-center, retrospective cohort study with IRB approval. All adults patients admitted with a new acute myeloid leukemia (AML) diagnosis from July 1, 2015 to September 30, 2019 were included. The primary outcome was the total incidence of proven, probable, and possible invasive fungal infections as defined by the European Organization for Research and Treatment of Cancer (EORTC). Secondary outcomes included time to invasive fungal infections, hospital length of stay, length of neutropenia, and mortality.

Results: A total of 19 patients had a new AML diagnosis and 18 patients were included. Out of 18 patients, the overall incidence of proven, probable, or possible invasive fungal infections was 11.1% with one proven and one probable invasive fungal infection. Time to the proven invasive fungal infection (IFI) from induction chemotherapy was 14 days, while time to the probable IFI was 33 days.

Conclusions: Mold-active triazole antifungals or echinocandins are appropriate therapy options for antifungal prophylaxis in patients receiving AML induction therapy when ANC falls below 1000.

Objective: To evaluate safety and efficacy of antifungal prophylaxis for patients with AML undergoing induction chemotherapy

Self Assessment Question: Is there a correlation between antifungal prophylaxis selection and incidence of invasive fungal infections?

10:45am – 11:00am P **94 - Evaluation of the of use of long-acting opioid agents in orthopedic surgery patients status post total hip or total knee replacement** Room J

Presenters: Sage Greenlee

Evaluation of the of use of long-acting opioid agents in orthopedic surgery patients status post total hip or total knee replacement

S Greenlee, K Williams, B Rains, D Nelson, D Childress
EAMC1 East Alabama Medical Center

Background: The 2016 Management of Postoperative Pain guidelines recommend against general use of long-acting oral opioids during the immediate postoperative period. In 2017, a community hospital implemented an extended-release oxycodone postoperative pain management order set. The purpose of this study was to evaluate outcomes of hospitalized patients who received opioids for pain management status post total hip or knee replacement surgery during the post-order set period versus the pre-order set period.

Methodology: Patients status post total hip or knee replacement surgery at EAMC from January 1, 2016 to December 31, 2016 and January 1, 2018 to December 31, 2018 were evaluated. Patients ≥ 19 years who received opioid therapy during the postoperative inpatient period were included. Exclusion criteria were scheduled opioids prior to surgery, bilateral joint replacement, and malignancy. The primary outcome was the percentage of patients who experienced an adverse event. Secondary outcomes were length of stay, discharge disposition, and median morphine milligram equivalent (MME) consumption.

Results: A total of 120 patients met inclusion criteria. Adverse events occurred in 47 (78.33%) post-order set patients and 31 (51.67%) pre-order set patients ($p = 0.0038$). The most common adverse event was hypotension with 36 (60%) post-order set patients and 24 (40%) pre-order set patients ($p = 0.0442$). The median length of stay was 3 days in both groups [2-3]. Regarding discharge, 43 (71.67%) post-order set patients and 46 (76.67%) pre-order set patients discharged home ($p = 0.6770$). Post-order set patients consumed 135 [102.38 – 193.38] median MMEs versus 150 [116.88 – 174.13] median MMEs in pre-order set patients ($p = 0.7854$).

Conclusions: Extended-release oxycodone use was associated with increased adverse events compared to traditional pain management despite lower MME consumption.

Objective: Describe the effects of extended-release oxycodone on orthopedic surgery patient outcomes

Self Assessment Question: Is scheduled, extended-release oxycodone associated with increased adverse events compared to traditional pain management?

Link: https://youtu.be/XXWMywcKFoQ

10:45am – 11:00am D **93 - Effects of 25 Percent Albumin Supplementation on Fluid Balance in Mechanically Ventilated Pediatric Patients** Room I

Presenters: Katherine Greenhill

Effects of 25 Percent Albumin Supplementation on Fluid Balance in Mechanically Ventilated Pediatric Patients

Katherine M. Greenhill, Travis S. Heath, Karan R. Kumar, Andrew G. Miller

DUHP2 Duke University Hospital (Pediatric)

Background: Lung injury is a major cause of morbidity and mortality among pediatric patients. Conservative fluid management has been shown to improve outcomes in these patients, however the optimal fluid management strategy is unknown. Fluid management with albumin supplementation has limited data in pediatric patients, however has demonstrated greater oxygenation in adults who receive albumin in addition to loop diuretics. The purpose of this study was to assess the effects of albumin supplementation on fluid balance and pulmonary outcomes in mechanically ventilated pediatric patients.

Methodology: This was an IRB-approved retrospective chart review. Pediatric patients from 1 month to less than 18 years of age who were admitted from July 1, 2013 to July 1, 2019 were eligible for study inclusion if they received 25 percent albumin supplementation while mechanically ventilated. Patients were excluded if they received 5 percent albumin within 48 hours of receiving 25 percent albumin, were admitted to a neonatal unit while receiving 25 percent albumin, or had a diagnosis of nephrotic syndrome. The primary outcome was net fluid balance 48 hours before and 48 hours after 25 percent albumin supplementation. Secondary endpoints included changes in ventilator settings, diuretic requirements, and serum albumin concentration 48 hours prior to and 48 hours after receiving 25 percent albumin supplementation.

Results: 277 patients were screened for study inclusion, of which 110 met inclusion criteria. The majority of those excluded either received 5 percent albumin within 48 hours of receiving 25 percent albumin supplementation (45/163 (27.6%)) or were < 1 month old when they received 25 percent albumin supplementation (48/163 (29%)). Out of the 114 eligible patients, there were 192 separate 25 percent albumin supplementation administrations at least 24 hours apart that were included. For the primary endpoint of net fluid balance before and after 25 percent albumin supplementation, the median (interquartile range) net fluid balance prior to and after albumin was +31.1 mL/kg/day (-17.2 to +99.9) and +1.4 mL/kg/hr (1.67 to 5.48), respectively.

Conclusions: Results from this study demonstrated a potential higher median fluid balance within the 48 hours prior to albumin supplementation as compared to the 48 hour period after albumin supplementation, however it cannot be determined if this was significant. Randomized controlled trials are required to determine if a difference exists.

Objective: Determine the effects of 25 percent albumin supplementation on fluid balance in mechanically ventilated pediatric patients.

Self Assessment Question: What is the proposed mechanism in which albumin may reduce pulmonary edema?

11:00am – 11:15am Y **105 - Investigation of Impact of Pharmacist Intervention Via Education and Lifestyle Modifications on Blood Pressure Readings in Patients with Uncontrolled** Room I

Presenters: Nicholas Harmon

Investigation of Impact of Pharmacist Intervention Via Education and Lifestyle Modifications on Blood Pressure Readings in Patients with Uncontrolled

Nicholas Harmon, Michael Justice, Benjamin Price, Caterina Hernandez
APCP1 Appalachian College of Pharmacy

Background: Approximately 75 million American adults (29%) have high blood pressure, which roughly translates to 1 in 3 American adults. Pharmacists operate in a pivotal position as they both have clinical knowledge of the most efficient drug therapies and lifestyle modifications for the management of this disease state, while also having access to patients in such a manner that allows pharmacists to provide available education to patients.

Methodology: This program will utilize TigeRx's pharmacists and pharmacy interns who have been specially trained for the program. All pharmacy staff will be provided an orientation on the program to achieve uniformity and consistency. This program compliments and will not replace the care patients already receive from their primary care physicians or specialists.
Patients of TigeRx Pharmacy with the aforementioned diagnoses will be approached to participate in this program by TigeRx pharmacists to assess if they meet the inclusion criteria while not meeting the exclusion criteria (see aforementioned inclusion and exclusion criteria at the end of this form). If they are deemed a valid candidate, the patient's baseline blood pressure will be measured; the patient will then receive a 30 - 60 minute education by one of the aforementioned staff relating to how to properly manage their hypertension through lifestyle modifications such as sodium restriction and regular exercise. At the conclusion of the education, the patient will receive an at-home blood pressure monitor, which they will be instructed on how to operate.
After the education, the patient will be contacted weekly by one of the aforementioned staff to assess adherence to lifestyle modifications discussed in the education; the patient's blood pressure readings will also be relayed to the staff during these weekly contacts The program will collect data on patients' demographic characteristics (e.g., age, gender, race/nationality, insurance coverage, highest level of education completed, number of underlying disease states), date of hypertension diagnosis, and current hypertension medications.
A diagnosis of hypertension, training, and education will be based upon the 2017 ACC/AHA Guidelines

Results: In Progress
Conclusions: In Progress
Objective: Identify the impact of a community's pharmacist intervention in lowering blood pressure of the enrolled subjects by approximately 10 points of systolic blood pressure and/or 5 points of diastolic blood pressure. At the conclusion of my presentation, the participants will be able to better manage their hypertension through lifestyle modifications
Self Assessment Question: What is the participant's reduction in systolic and diastolic blood pressures compared to baseline?
A.It causes an increase in blood pressure
B.It causes a decrease in systolic but not in diastolic
C.It causes a decrease in both systolic and diastolic
D.It causes a decrease in diastolic but an increase in systolic

Link to Video Presentation: https://www.youtube.com/watch?v=sefwQyKJhQQ

11:00am – 11:15am R **100 - Evaluation of Parenteral Medications Volume and Chloride Burden of in Surgical ICU Patients** Room D

Presenters: Lydia Halim Girgis

Evaluation of Parenteral Medication Diluents Contribution to Total Volume and Chloride Burden in Surgical ICU Patients

Lydia Halim Girgis, Ellen Huang
AUMC1 Augusta University Medical Center/ University of Georgia College of Pharmacy

Background: Current literature suggests that use of chloride rich fluids as well as overall fluid positivity may be associated with poor outcomes and renal injury. However, there is a lack of literature focused specifically on the surgical patient population, many of whom have higher risk of fluid and electrolyte losses and often require a different fluid management strategy. The primary objective of the study is to characterize the percent contribution of medication diluents to the total volume and total chloride content administered to patients admitted to the SICU. The secondary objective is to examine whether there is association between the total volume of fluids and amount of chloride administered via medications administered to the incidence of acute kidney injury and hyperchloremia.

Methodology: Eligible patients are 18 years or older admitted to AU Medical Center on the acute care surgery service in the SICU within the past year. Patients who expired or were discharged from the SICU within 48 hours of admission were excluded from the study.

Results: A total of 39 patients met the inclusion criteria. Median age 62 (19) years, 71.8 % males, 81.2% received at least one nephrotoxic medication. The median percent contribution of medication diluents was 32.8 (31.4) and total volume 976.4 (1144.6) ml, while the percent chloride was 46.5 (48.1) and contribution in mmols 130.1 (146.8).

Conclusions: The composition of fluids in the surgical ICU patients appears to be consistent with the findings in previous literature regarding the medial ICU population. Medication diluents contribute greater than one-third of the total volume intake and are composed of greater than 80% of normal saline therefore contributing significantly to the total chloride intake. Further studies with a larger cohort are needed to determine impact of the volume and chloride contributions from medication diluents on the incidence of acute kidney injury and hyperchloremia.

Objective: Assess the impact of fluid selection for medication diluents on the chloride burden and volume status in surgical ICU (SICU) patients as a surrogate for predicting acute kidney injury
Self Assessment Question: T/F Hyperchloremia is directly linked to acute kidney injury. True
LINK TO PRESENTATION: https://vimeo.com/410780053

11:00am – 11:15am R **101 - Evaluation of glycemic control with subcutaneous long-acting insulin versus continuous insulin infusion in critically ill patients** Room E

Presenters: Alexandria Hall

Evaluation of glycemic control with subcutaneous long-acting insulin versus continuous insulin infusion in critically ill patients

Alexandria Hall, Tu-Trinh Tran, Marina Rabinovich, Rita Gayed
GMHC2 Grady Memorial Hospital (Critical Care)

Background: Hyperglycemia is associated with worse outcomes in critically ill patients. Previous literature has demonstrated a benefit in morbidity and mortality for those with a glycemic target of <180mg/dL. Hyperglycemia can occur in the absence of diabetes, secondary to severe stress and increased counter-regulatory hormones. Intravenous therapy is generally recommended over subcutaneous (SC) insulin for these patients due to hemodynamic instability, potential renal injury, inconsistencies in carbohydrate administration, and alterations of absorption in the setting of edema.

Methodology: This was a single-center, retrospective study evaluating the safety and efficacy of long-acting subcutaneous insulin versus a computerized continuous intravenous insulin infusion (CII) strategy in critically ill patients. Patients were included if they were in the ICU and received ≥48 hours of SC insulin detemir or the non-diabetic ketoacidosis CII protocol. The primary outcome was the percent of blood glucose (BG) values within target range (70 – 180 mg/dL) in each group. Secondary outcomes included rates of hypo- and hyper-glycemia, therapy escalation to insulin infusion in the SC insulin group, and time to BG target. Descriptive statistics were used to describe baseline characteristics. Mann-Whitney U-test was used for continuous data whereas the Chi-squared test was used for categorical.

Results: CII was associated with better glycemic control (71.9% vs 47.9%, $p < 0.05$), and more rapidly in the CII group (7.1 vs 18.6 hours), when compared to SC insulin detemir. Hypoglycemia occurred less frequently in those receiving CII (0.1% vs 3.1%). Of the patients receiving insulin detemir, 14 (14%) required escalation to CII for glycemic control.

Conclusions: In critically ill patients, CII managed by eGlycemic management system® is safer and more effective at achieving glycemic control than subcutaneous long-acting insulin.

Objective: Identify an appropriate strategy for glycemic control in critically ill patients

Self Assessment Question: T/F: Continuous IV insulin may be associated with better glycemic control in critically ill patients.

11:00am – 11:15am R **103 - Evaluation of adjunctive Abigaintermittent pneumatic compression with enoxaparin in preventing venous thromboembolic events in critically ill patients** Room G

Presenters: Abigail Hamlin

Evaluation of adjunctive intermittent pneumatic compression with enoxaparin in preventing venous thromboembolic events in critically ill patients

Abigail Hamlin, Victoria Hunt, Joseph Crosby, Sabrina Croft, John Carr
SJCH1 St. Joseph's/Candler Health System

Background: The Surviving Sepsis Campaign Guidelines suggest the combination of pharmacologic and mechanical prophylaxis, such as intermittent pneumatic compression (IPC) as a weak recommendation. Within the St. Joseph's/Candler (SJ/C) Health System, adjunctive IPC with pharmacologic prophylaxis is often practiced within the critical care setting, and our study aimed to determine if this practice decreases the incidence of venous thromboembolic events (VTE).

Methodology: This retrospective, observational, chart review evaluated adult patients with adjunctive IPC and on either enoxaparin 30 mg or 40 mg daily for VTE prophylaxis who have been admitted to the ICU, CCU, or NICU within SJ/C and compared them to patients on enoxaparin alone. Information was gathered on study subjects from March to September 2019, which included their baseline demographics, intensive care unit length of stay, mechanical ventilation status, and use of vasopressors.

Results: Of the 495 patients included, 330 patients received enoxaparin alone and 165 patients received adjunctive IPC in addition to enoxaparin. There was not a statistically significant difference in incidence of VTE events between patients on enoxaparin alone in comparison to enoxaparin with adjunctive IPC, with VTE events occurring in 2.1% and 1.8% of patients, respectively (p-value = 0.41). There were more days of mechanical ventilation and a higher rate of mortality in patients with adjunctive IPC.

Conclusions: Adjunctive IPC in addition to enoxaparin does not have a significant impact on the incidence of VTE events when used for VTE prophylaxis. More days of mechanical ventilation and the higher rate of mechanical ventilation in patients with adjunctive IPC are likely indicative of this group being a more acutely ill population.

Objective: Determine if adjunctive IPC in addition to enoxaparin decreases VTE events in critically ill patients. Self Assessment Question: What are potential risk factors that put critically ill patients at an increased risk for developing VTE events?

LINK TO PRESENTATION
https://youtu.be/3TMQS9ckFIY

11:00am – 11:15am R **106 - Comparison of a symptom-triggered benzodiazepine based protocol to a phenobarbital based protocol for the management of alcohol withdrawal** Room J

Presenters: Priscilla Harrison

Comparison of a symptom-triggered benzodiazepine based protocol to a phenobarbital based protocol for the management of alcohol withdrawal

Priscilla Harrison, Jacquelyn Bryant, Molly Bennett, Molly Thompson
TDMC1 Trident Medical Center

Background: The purpose of this study is to evaluate the safety and efficacy of a symptom-triggered benzodiazepine based protocol (STP BZD) versus a phenobarbital (PHB) based protocol for the management of alcohol withdrawal (AW) in a community hospital.

Methodology: Patients at least 18 years of age who received treatment for AW via STP BZD based protocol or PHB based protocol were screened for study inclusion. Data analyzed included patient demographics, BZD or PHB dose, CIWA-Ar scores, PHB levels, and use of adjunctive AW treatment. The primary efficacy endpoint was ICU and ICU step-down unit length of stay (LOS). The primary safety endpoint examined incidence and duration of mechanical ventilation (MV).

Results: Patients in the PHB cohort (n=26), compared to STP BZD cohort (n=38), presented with similar blood alcohol levels on admission (161.0 mg/dL vs 168.5 mg/dL) and demonstrated lower peak CIWA-Ar scores (18 vs. 20) during treatment.

Combined ICU and ICU step-down unit LOS for PHB and STP BZD patients was 64.9 hours and 107.9 hours (p=0.04), respectively. Median hospital LOS for PHB and STP BZD patients was 138.7 hours and 182.5 hours (p=0.04). Incidence of MV was lower for PHB patients (n=3) than STP BZD patients (n=12) during protocol treatment.

Conclusions: Shorter LOS in ICU and ICU step down units and shorter total hospital LOS was observed in the PHB cohort when compared to the STP BZD cohort. Safety endpoints also demonstrated favorable outcomes for patients who received PHB.

Objective: Describe proposed benefits and limitations of using a phenobarbital based protocol for the management of alcohol withdrawal.

Self Assessment Question: Is phenobarbital a safe and effective alternative to traditional benzodiazepine based treatment of alcohol withdrawal?

11:00am – 11:15am R **98 - Emergency Department Physician Response to Rapid Blood Culture Identification following Implementation of Antibiotic Stewardship Recommendations** Room B

Presenters: Bayar Haji

Emergency Department Physician Response to Rapid Blood Culture Identification following Implementation of Antibiotic Stewardship Recommendations

Bayar Haji, Montgomery Green, Jonathan Pouliot, Deborah Armstrong
WSMC1 Williamson Medical Center

Background: Rapid blood culture identification (BCID) by polymerase chain reaction (PCR) coupled with antimicrobial stewardship practices are effective methods of optimizing guideline recommended therapies. These methods have led to more prompt de-escalation of antibiotics and reductions in inappropriate antibiotics. An antibiotic stewardship program recommended algorithm was created for emergency department (ED) physicians at Williamson Medical Center in April 2018 for response to positive blood cultures reported after discharge from the ED. The purpose of this study is to determine if implementation of this algorithm led to a difference in compliance with antibiotic stewardship recommendations.

Methodology: Single center retrospective study of 113 patients with positive BCID reported after ED discharge, including 56 patients prior to the implementation and 57 patients after implementation. The primary objective was to determine whether the algorithm led to a difference in compliance with antibiotic stewardship recommendations. Secondary objectives included whether the algorithm led to 1) a difference in return visits for blood culture contaminates, 2) interventions required by antibiotic stewardship member program, and 3) selection of appropriate antibiotics.

Results: Baseline demographics were similar between groups. There were no statistically significant differences between the pre- and post-implementation groups in compliance with the algorithm (60% vs. 64.9%; p=0.64). No differences were found in return visits for blood culture contaminates (8.9% vs. 5.3%, p=0.26), interventions required by antibiotic stewardship member (20% vs. 17.9%, p=0.77), or selection of appropriate antibiotics (66.7% vs. 59.6%, p=0.46).

Conclusions: In the present study, the implementation of an antimicrobial stewardship algorithm did not lead to any differences in ED physician response to positive BCID reported after patients were discharged.

Objective: Determine if implementation of this algorithm led to a difference in compliance with antibiotic stewardship recommendations.

Self Assessment Question: Which of these statements about the implementation of the antibiotic stewardship algorithm is true?

https://www.youtube.com/watch?v=xmY3wTUBIFY

11:00am – 11:15am | **102 - Opportunities for Improvement at Medication Order Entry for Antiretroviral Therapy** Room F

Presenters: Megan Hamilton

Opportunities for Improvement at Medication Order Entry for Antiretroviral Therapy

Megan Hamilton, Kim Heath, Benjamin Casey

TSCM1 TriStar Centennial Medical Center

Background: In 2019, the Infectious Disease Society of America in conjunction with the HIV Medicine Association, and American Academy of HIV Medicine, put forth a call to action for the development of antiretroviral stewardship programs to enhance patient safety. The aim of this study is to identify opportunities for improvement with antiretroviral therapy management within the first 24 hours of inpatient therapy at our facility.

Methodology: This is a retrospective chart review of adult patients admitted from June 2018 to May 2019 with a previous diagnosis of HIV and receiving antiretroviral therapy in the inpatient setting. Patients who meet inclusion and exclusion criteria had their antiretroviral therapy evaluated for opportunities for improvement with antiretroviral order timing, drug interaction management, and medication reconciliation.

Results: A total of 147 opportunites for antiretroviral therapy optimization were identified in 89/146 (61.0%) of patients, with a median of 1 (range: 0-4) opportunities per patient. The most commonly identified opportunity was unaddressed drug-drug interactions, 63% (93/147), with the suboptimal antiviral timing (12%, 18/147) and drug omission (14%, 20/147) being the second and third most common opportunity identified, respectively. Notably, the medication class with the most opportunity for improvement per patient was the protease inhibitors (100%, 41/41).

Conclusions: The incidence of medication discrepancies found in our study was similar to those previously reported. The results of this retrospective chart review will provide the framework for future pharmacist-led antiretroviral stewardship programs such as clinical decision support tools, pharmacist and physician education, and medication reconciliation education.

Objective: At the conclusion of my presentation, the participant will be able to identify potential opportunities for improvement at medication order entry for antiretroviral therapy.

Self Assessment Question: What are opportunities for improvement at medication order entry for antiretroviral therapy?

11:00am – 11:15am | **104 - Vancomycin Plus Cefazolin versus Vancomycin Alone for the Prevention of Post-Catheter Removal Clinical Sepsis in Neonates** Room H

Presenters: Emily Harden

Vancomycin Plus Cefazolin versus Vancomycin Alone for the Prevention of Post-Catheter Removal Clinical Sepsis in Neonates

Emily Harden, Sonam Patel, Katelyn Hood
AUMC1 Augusta University Medical Center/ University of Georgia College of Pharmacy

Background: Post-catheter removal clinical sepsis (PCRCS) is a potential complication following removal of a peripherally-inserted central catheter (PICC) or umbilical venous catheter (UVC). The Neonatal Intensive Care Unit (NICU) at the Children's Hospital of Georgia utilized one time doses of cefazolin plus vancomycin prior to line removal for PCRCS prophylaxis until a cefazolin shortage in early 2019 led to its removal from the regimen. The purpose of this study is to identify the impact of the removal of cefazolin from this regimen on the incidence of neonatal PCRCS.

Methodology: This was a single-site, retrospective chart review of all NICU patients who received one-time doses of vancomycin plus cefazolin or vancomycin alone prior to PICC or UVC removal from September 1, 2016 to February 26, 2019 and February 27, 2019 to April 1, 2020 respectively. The primary outcome was the occurrence of PCRCS events in each group, defined as having a sepsis evaluation and receipt of antibiotics for ≥ 48 hours initiated ≤ 72 hours after line removal. Statistical methodology for the primary outcome included a non-inferiority chi-square test with descriptive statistics utilized for secondary outcomes.

Results: Each group contained 200 patients. The vancomycin alone group had a higher percentage of birthweights < 1500 grams and lower mean gestational age, indicating a larger percentage of high risk patients in the vancomycin group. A higher percentage of cultures were obtained in the vancomycin plus cefazolin group compared to vancomycin alone (11 vs. 3 respectively, p=0.0302). No difference existed in development of PCRCS in each group (p=0.0191). Secondary analyses were unable to be performed due to only one PCRCS event.

Conclusions: Vancomycin alone was non-inferior to one time doses of vancomycin and cefazolin for prevention of neonatal PCRCS. A one time dose of vancomycin prior to central line removal is a suitable preventative measure for neonatal PCRCS.

Objective: Describe the impact cefazolin removal from the PCRCS prophylaxis regimen may have on PCRCS incidence.
Self Assessment Question: What are two factors that may increase the risk of infection in a neonatal population?

LINK TO PRESENTATION: https://vimeo.com/410820922

11:00am – 11:15am | **107 - Evaluation of Methicillin-Resistant Staphylococcus aureus nasal swab directed vancomycin de-escalation in respiratory infections** Room K

Presenters: Audry Hawkins

Evaluation of Methicillin-Resistant Staphylococcus aureus nasal swab directed vancomycin de-escalation in respiratory infections

Audry Hawkins, J. Andrew Carr, Todd McCarty
BVAM1 Brimingham VA Medical Center

Background: Methicillin-Resistant Staphylococcus aureus (MRSA) nasal swabs have been determined as an appropriate driving force in antibiotic stewardship for respiratory infections in recent literature. If a patient is not colonized in the nares with MRSA, the likelihood of an MRSA respiratory infection is highly unlikely. The negative predictive value has been reported as high as 98% which has led institutions to implement antibiotic de-escalation techniques centered around nasal swab results. The purpose of this project is to evaluate the effect of implementing this guidance on antibiotic stewardship in patients with negative MRSA nasal swabs and a respiratory infection.

Methodology: This research project will consist of a retrospective chart review conducted by reviewing electronic medical records and collecting data on a specific data collection form. Patient information will be gathered for any patient receiving vancomycin empirically for a respiratory infection that also has a negative MRSA nasal swab on admission. The patient chart will be reviewed for empiric vancomycin initiated for respiratory infections and the time at which vancomycin was appropriately discontinued. This time period will include before implementation of MRSA nasal swab directed antibiotic de-escalation and after implementation to assess if the new guidance affected antibiotic stewardship. Any patient identified will be evaluated for appropriate de-escalation of vancomycin for a respiratory infection. The causality of MRSA colonization in the nares and respiratory infections from MRSA will not be explored. With these results, facility wide acceptance of the utility of MRSA nasal swabs driving antibiotic stewardship will be assessed.

Results: In progress

Conclusions: In progress

Objective: Identify if guidance implemented on using MRSA nasal swab driven vancomycin de-escalation in community acquired pneumonia is being utilized

Self Assessment Question: Does implementing a protocol to provide guidance on antimicrobial stewardship increase utilization of negative MRSA nasal swabs to de-escalate vancomycin in community acquired pneumonia?

11:00am – 11:15am | **108 - Area-under-the-curve-guided dosing versus trough-based dosing of vancomycin for Staphylococcus aureus bacteremia, a noninferiority study** Room L

Presenters: Megan Heath

Area-under-the-curve-guided dosing versus trough-based dosing of vancomycin for Staphylococcus aureus bacteremia, a noninferiority study

Megan Heath, Leborah Lee, Nancy Bailey, William Johnson, Terry Harris
JCKH1 Jackson Hospital and Clinic

Background: Significant controversy exists over the optimal dosing and monitoring strategies for vancomycin despite area-under-the-curve-(AUC) guided dosing demonstrating improved safety outcomes relative to trough-based dosing. This study aimed to assess if AUC-guided dosing of vancomycin was noninferior to trough-based dosing when examining rates of treatment failure in Staphylococcus aureus bacteremia.

Methodology: An IRB-approved, retrospective cohort, noninferiority chart review was conducted utilizing electronic health records. Patients were identified by blood cultures that grew either methicillin-susceptible Staphylococcus aureus or methicillin-resistant Staphylococcus aureus. A prespecified noninferiority margin of 20% was used to assess the primary outcome of treatment failure. Treatment failure was defined as the patient experiencing at least one of the following: a fever 48 hours after antibiotic use, repeat positive blood cultures 72 hours after antibiotic use, changing antibiotic therapies for reasons other than de-escalation, or death by any cause.

Results: A total of 192 patients were included in this study. There were 66 patients in the AUC-guided cohort and 126 patients in the trough-based cohort. Treatment failure rates for the AUC and trough cohorts were 38.1% and 37.8% respectively (95% confidence interval, -14 to 14) which demonstrated noninferiority of AUC-guided dosing.

Conclusions: In this single-center study, AUC-guided dosing of vancomycin was shown to be noninferior to trough-based dosing when treating Staphylococcus aureus bacteremia in regards treatment failure. These data coupled with previous safety data support increased integration of AUC-guided dosing into clinical practice.

Objective: Apply current evidence and examine different dosing strategies for vancomycin in hospitalized patients with Staphylococcus aureus bacteremia.

Self Assessment Question: What is the goal range for AUC-guided dosing of vancomycin according to the proposed 2020 guidelines for the therapeutic monitoring of vancomycin?

https://vimeo.com/409050594

11:00am – 11:15am | **97 - Successful aging with human immunodeficiency virus (HIV): focus on antiretroviral (ARV) therapy** Room A

Presenters: Meera Gupta

Successful aging with human immunodeficiency virus (HIV): focus on antiretroviral (ARV) therapy

Meera Gupta, Kathryn DeSilva, and Bonnie Chan
AVAH1 Atlanta Veterans Affairs Health Care System

Background: The Department of Veterans Affairs (VA), Infectious Disease clinic in Atlanta, Georgia is the largest in the nation providing care to more than 1600 HIV Veterans. Studies have shown a potential association between abacavir (ABC) and increased risk for cardiovascular disease (CVD). Most experts recommend avoiding ABC in patients with CVD. The guidelines recommend an ABC-containing regimen as an option for most HIV treatment- naïve patients. This has been an option for individuals who wanted to avoid drug interactions with cobicistat or ritonavir, and for individuals with chronic kidney disease who wanted to avoid tenofovir. As HIV patients are living longer, successful aging is a growing area of concern. Complications seen in people with HIV are increasingly related to chronic co-morbidities. The purpose of the study is to identify patients who may benefit from abacavir-free regimen in order to minimize CVD risk.

Methodology: This study was an IRB approved, single center, retrospective, chart review of patients aged 18 years or older, virologically suppressed (HIV viral load < 20 copies/mL), and on an abacavir-containing regimen. A report was generated from electronic VA database to identify patients that received ABC–containing regimen between October 2018 and September 2019. Manual chart review was performed to assess the presence of CVD (history of myocardial infarction, coronary artery disease, or stroke). CVD negative patients had a CVD risk score calculated through both Framingham and Data Collection on Adverse Effects of Anti-HIV drugs (D:A:D) model. Pertinent information collected included patient’s demographics, tenofovir history, protease inhibitor history, presence of CVD, Framingham score, Framingham classification, and D:A:D score.

Results: "In Progress"

Conclusions: "In Progress"

Objective: Quantify the risk or presence of CVD in patients on an abacavir containing regimen.

Self Assessment Question: Approximately one in five patients at the Atlanta VA, who are on a stable ABC-containing regimen were found to have CVD, a relative contraindication to its use?

11:00am – 11:15am T **99 - Medication Reconciliation and Counseling: Measuring the Impact of Pharmacist Involvement through Satisfaction Scores and Detection of Discrepancies** Room C

Presenters: Allie Hale

Medication Reconciliation and Counseling: Measuring the Impact of Pharmacist Involvement through Satisfaction Scores and Detection of Discrepancies

Allie Hale, Kathy Calloway-Sykes, Lila Newman
PRHS1 Parkridge Health System

Background: Assess the impact of pharmacist involvement on patient understanding of new medications at discharge and evaluate detection of unintentional discrepancies on discharge summaries

Methodology: Eligible participants were ≥18 years, discharged from the 3-West cardiac unit with at least one new medication, and English speaking. Discharge summary of each patient was reviewed in order to identify unintentional discrepancies. Patients were counseled on new medications by the pharmacist and provided patient education documents. Patients were subsequently provided a questionnaire to assess satisfaction of inpatient service quality.

Results: Discharge summaries of 50 patients were reviewed by the pharmacist, and an average of 1.86 unintentional discrepancies per patient were identified. Unintentional discrepancies involved duration of therapy, dose of medication, frequency, major drug-drug interactions, and duplicate therapy. Of those 50 patients, 22 patients were counseled by the pharmacist on new medications at discharge and provided information regarding mechanism of action, indication, administration, and potential adverse drug reactions. Fourth quarter patient satisfaction scores compared to third quarter data demonstrated a 14.1% increase in patients that answered “strongly agree” when asked about their understanding of new medication purpose. There was a 3.2% decrease from third quarter to fourth quarter data pertaining to patients that answered “always” to understanding of medication indication and side effects.

Conclusions: Based on the increase in patient understanding of medication purpose demonstrated by scores as well as positive face-to-face patient feedback, we believe there is a need for pharmacist involvement in patient discharge counseling. Additionally, the unintentional discrepancies identified support the need for pharmacist involvement in the medication reconciliation process in order to optimize patient care.

Objective: Describe potential errors that could be identified during the medication reconciliation process.

Self Assessment Question: What constitutes an unintentional discrepancy in the medication discharge summary review?

11:15am – 11:30am A **111 - Biosimilar Market Entry and Adoption: Healthcare Leader Perceptions and Payer Policy Realities** Room C

Presenters: Kyle Herndon

Biosimilar Market Entry and Adoption: Healthcare Leader Perceptions and Payer Policy Realities

Kyle Herndon, Jason Braithwaite

Background: Biologics play a fundamental role in limiting disease progression, controlling symptoms, improving quality of life, and increasing response rates to certain cancers and autoimmune diseases. Biosimilars are “highly similar” to their reference biologic and have “no clinically meaningful differences”. The FDA has approved 26 biosimilars, but only 14 have launched in the U.S. market, indicating that there are significant hurdles to market entry, but even after market entry, there are many perceived barriers to adoption of these products. The purpose of this research is to gain insight into perceived barriers to biosimilar adoption and examine commercial payer medical benefit policies to further characterize this specific perceived barrier to adoption.

Methodology: This study was approved by the University of Tennessee Institutional Review Board. A survey to assess perceived barriers to biosimilar adoption and market entry was dispersed to healthcare leaders across the HealthTrust membership. Assessment categories include prescribing, provider education, safety and efficacy, interchangeability, reimbursement, litigation, and regulation surrounding biosimilars. Additionally, policies from the top 15 commercial payers by covered lives were reviewed to collect information surrounding coverage and preferred product status to assess if perceptions from healthcare leaders align with these data to provide a correlation. Data will be analyzed using descriptive statistics.

Results: Preliminary data suggests majority of perceptions find biosimilars to be safe and efficacious compared to the reference product, including extrapolation of indications to all that the reference product holds. The largest perceived barrier to adoption is rebate tactics between manufacturers and payers in exchange for preferred product status. Data collection and policy research is ongoing.

Conclusions: In progress.

Objective: Outline the most prevalent perceived barriers to market entry and adoption of biosimilars.

Self Assessment Question: How many of the 26 FDA-approved biosimilars have launched in the United States market?

11:15am – 11:30am B **109 - Insurance Status As a Determinant of Time-In-Therapeutic-Range Within a Pharmacist-Managed Anticoagulation Clinic** Room A

Presenters: Kyree Henry

Insurance Status As a Determinant of Time-In-Therapeutic-Range Within a Pharmacist-Managed Anticoagulation Clinic

Video Link: https://youtu.be/f48nns4VGxc

Purpose/Background: The safety and effectiveness of vitamin K antagonist (VKA) anticoagulants (e.g. warfarin) are highly dependent on the maintenance of a therapeutic international normalized ratio (INR). For patients with atrial fibrillation (AF), higher time-in-therapeutic-range (TTR) is associated with lower rates of stroke/systemic embolism, major bleeding, and mortality. Many cardiovascular outcomes have been shown to disproportionally affect individuals with low socioeconomic status, independently of clinical risk factors. The purpose of this investigation is to characterize any differences in TTR using insurance status as a marker for socioeconomic status (SES).

Methods: This retrospective analysis examined patients followed at the AU Anticoagulation Clinic from January 1st, 2011 to December 31st, 2018. Adult patients with AF in the absence of mechanical heart valves and/or moderate-to-severe mitral stenosis were included in the analysis. Groups were analyzed by insurance status using multivariate analysis and include Private, Medicare + Private, Medicare, Dual Eligible, Medicaid, and Uninsured/ICTF.

Results: 173 patients were analyzed. Patients in groups with lower associated SES (e.g. Medicaid and Uninsured/ICTF) had lower TTR values. The mean TTR was not statistically significant between groups in simple ($p = 0.18$) or final ($p = 0.08$) ANCOVA models. Though no statistical difference was observed, Uninsured/ICTF patients had a mean TTR of 56% compared to a mean TTR of 75% in patients with private insurance in the final ANCOVA model.

Conclusions: According to established literature, patients with TTR < 65% are at significantly increased risk for stroke/systemic embolism, major bleeding, and mortality. Based on the results of this investigation, as well as current guideline recommendations, non-vitamin K oral anticoagulants (NOACs) should be considered first-line treatment for eligible patients with AF.

Presentation Objective: Identify social factors that may influence TTR.

Self-Assessment: How does insurance type influence TTR for patients who are anticoagulated using warfarin?

11:15am – 11:30am B **115 - Impact of pharmacist-led inhaled medication management clinic in chronic obstructive pulmonary disease (COPD)** Room G

Presenters: Jessica Holleman

Impact of pharmacist-led inhaled medication management clinic in chronic obstructive pulmonary disease (COPD)

Jessica Holleman, Elizabeth Jacobs, Brian Leith

FVMC2 Fayetteville VA Medical Center (Ambulatory Care)

Background: COPD is the fourth most diagnosed condition in hospitalized veterans aged 65-74 and is a leading cause of death and health care expense in the United States. Pharmacists can be a valuable source in the patient care team to provide education to veterans and to optimize medication management of COPD. The purpose of this quality improvement project is to expand pharmacist services within the Fayetteville Veterans Affairs Medical Center by introducing a pharmacist-led inhaler management clinic for patients with COPD.

Methodology: Patients to be enrolled in the pharmacist COPD inhaler management clinic were identified using hospitalization and urgent care visit records, or were referred by other providers. The primary outcome was to evaluate pharmacist interventions made, using an endpoint of number of interventions. The secondary outcome was to identify the sources of patients for the clinic.

Results: Seventy-two patients were identified for screening with 24 patients included and 17 patients seen in clinic; forty-eight patients were excluded. Eight patients were referred by respiratory therapists, 3 by clinical pharmacist specialists (CPS), and 2 by urgent care providers. Patients were also identified using inpatient hospitalization (n= 10) and urgent care visit lists (n= 49). For the primary endpoint, a total of 45 pharmacist interventions (medication intervention, medication monitoring, non-pharmacologic intervention) were made over 23 clinic visits.

Conclusions: This quality improvement project identified a new area for pharmacist impact and assisted in the expansion of pharmacy services. Future directions could include creating shared appointments with a pharmacist and respiratory therapist, creating a full-time CPS position within the pulmonary clinic, or having primary care CPS monitor urgent care and inpatient discharges related to COPD.

Objective: Evaluate the implementation of a pharmacist-led COPD inhaler management clinic.

Self Assessment Question: What opportunities were found for pharmacist COPD inhaler management?

Video: https://youtu.be/69mIl2hAmyw

11:15am – 11:30am R **110 - Assessment of outcomes in patients with end-stage renal disease and congestive heart failure following fluid resuscitation for sepsis and septic shock** Room B

Presenters: John Michael Herndon

Assessment of outcomes in patients with end-stage renal disease and congestive heart failure following fluid resuscitation for sepsis and septic shock

John Michael Herndon, Thomas S. Achey, Hillary B. Holder, Sarah B. Blackwel
PBMC1 Princeton Baptist Medical Center

Study objective: Assess the efficacy and safety of guideline-concordant fluid resuscitation in patients with sepsis or septic shock in the setting of ESRD (end-stage renal disease) or CHF (congestive heart failure).
Patients: We conducted a retrospective cohort study of 713 patients identified by ICD-10 diagnosis codes as having severe sepsis or septic shock with ESRD and/or CHF comorbidities between July 1, 2016 and June 30, 2019. Patients receiving a minimum of 30 mL/kg crystalloid fluid bolus within 3 hours of sepsis diagnosis were placed in the guideline concordant group and all others in the non-guideline concordant group.
Measurements and Main results: 285 patients were screened and 111 patients met inclusion criteria. 62 patients were placed in the guideline concordant group and 49 patients in the non-guideline concordant group. Our primary outcome between the two groups was in-hospital mortality. Secondary outcomes assessed length of stay (LOS), adverse effects related to volume overload, and hemodynamic support requirements. In-hospital mortality for the guideline concordant group and the non-guideline concordant group was 38.7% and 44.9% respectively (p=0.696). The guideline concordant group had a shorter hospital LOS (10.9 days vs 17.9 days, p=0.01) and shorter ICU LOS (6.1 days vs 10.8 days, p=0.019). Additionally, there was a lower incidence of acute kidney injury (AKI) in the guideline concordant group (13.7% vs 43.3%, p=0.0415).
Conclusion: Our study did not show a statistically significant difference for in-hospital mortality between the two groups. However, patients that received guideline-recommended fluid resuscitation had a shorter hospital and ICU LOS. Additionally, patients in the guideline concordant group had a lower incidence of AKI.

Objective: Describe outcomes following fluid resuscitation for sepsis or septic shock in patients with concomitant CHF and/or ESRD.
Self Assessment Question: Should fluid resuscitation for patients with sepsis or septic shock and concomitant CHF and/or ESRD deviate from the SSC guideline-recommended 30 mL/kg crystalloid fluid bolus?

https://www.youtube.com/watch?v=qVU9VtMuY74

11:15am – 11:30am R **118 - Evaluation of alteplase administration for treatment of acute ischemic stroke at a South Georgia community hospital** Room J

Presenters: Allison Howard

Evaluation of alteplase administration for treatment of acute ischemic stroke at a South Georgia community hospital

Allison Howard, Kevin VanLandingham, Maura Hall
JAMH1 John D. Archbold Memorial Hospital

Background: Timing is critical in managing and treating ischemic stroke. The purpose of this study was to evaluate alteplase administration in adult patients presenting with ischemic stroke at a community hospital.
Methodology: A retrospective chart review was performed on patients who had documentation of receiving alteplase between October 2017 to August 2019 (n=26) with the diagnosis of ischemic stroke. Demographics, drug dose, administration time, blood glucose, blood pressure, time of ER registration, contraindications, time of CT scan, NIHSS score, and time for tele-neurology consult were evaluated to determine administration compliance with American Heart Association (AHA) guidelines. Time for door-to-needle was calculated. A secondary chart review was performed on patients with ICD 10 163 coding for acute ischemic stroke during the 2019 calendar year (n=176). Patients were excluded if they received alteplase or did not have diagnosis of ischemic stroke. Charts were reviewed for 77 patients who met criteria and the same demographic information was evaluated to determine choice of treatment.
Results: Appropriateness of alteplase use was identified; however, the goal time of door-to-needle for medication administration was not achieved in all cases. In the secondary analysis, length of time from symptom onset to medical presentation was the most common exclusion criteria for alteplase therapy.
Conclusions: Alteplase use was found to be compliant with AHA guidelines. However, further evaluation of patient flow from arrival to time of drug administration is warranted. In addition, based on review of the patient population that was medically managed, there is a great need to educate the community on ischemic stroke to address the issue of delayed presentation to the ER.
Objective: Assess the use of alteplase at a level 3 trauma center in a community hospital setting.
Self Assessment Question: True or false: Alteplase can be administered within 24 hours of symptom onset.

11:15am – 11:30am R **119 - Evaluation of current practices of enteral nutrition (EN) delivery in mechanically ventilated (MV) patients in the intensive care unit (ICU)** Room K

Presenters: Rebecca Howell

Evaluation of current practices of enteral nutrition (EN) delivery in mechanically ventilated (MV) patients in the intensive care unit (ICU)

Rebecca Howell, Maelen Ignacio, Ryan Lapointe, Jessica Small, Erin Shealy,
SBMC1 Spartanburg Medical Center

Background: Malnutrition has been associated with an increased risk of infection, mortality, hospital cost and length of stay (LOS). Inappropriate cessation of EN increases risk of malnutrition and development of ileus. This study aimed to evaluate the relationship between gastric residual volume (GRV) monitoring and interruptions in EN delivery in MV patients in the ICU.
Methodology: A single-centered, retrospective chart review was conducted from August 1, 2019 to September 30, 2019. Eligible participants were adult patients at least 18 years of age admitted to the ICU who received EN and MV for ≥ 48 hours. Patients were excluded if EN was received for < 48 hours. Subjects were grouped into two arms: those with GRV checks > 2 times per day and ≤ 2 times per day. Primary outcome was frequency of interruption in EN. Secondary outcomes included hospital mortality, ICU LOS, and days on MV.
Results: There was no difference in primary outcome of frequency of EN interruption between the two groups (p= 1.00). However, there was an observed trend towards increased inappropriate cessation of EN in the arm with more frequent GRV checks (14.6% vs 4%; p=0.3277). Additionally, there were no differences in the secondary outcomes of hospital mortality (p= 1.00), ICU LOS (p= 0.595) and days on MV (p= 0.32).
Conclusions: More frequent GRV monitoring (> 2 times per day) was not associated with improved patient outcomes. It may, however, increase unnecessary interruptions in EN delivery.
Objective: Describe the relationship between gastric residual monitoring and EN delivery in MV patients in the ICU.
Self Assessment Question: True or False: Frequent measurement of GRV does not correlate with more interruption in tube feedings, but may be associated with more inappropriate cessation of EN delivery.
https://youtu.be/G71ASjj6pM0

11:15am – 11:30am | **117 - Outcomes of cefazolin use for Enterobacteriaceae** Room I

Presenters: Melissa Holy

Outcomes of cefazolin use for Enterobacteriaceae

Melissa Holy, Roby Hersey, Eric Shaw
MHUM1 Memorial Health University Medical Center

Background: In 2011, the Clinical and Laboratory Standards Institute revised the MIC breakpoints of cefazolin against Enterobacteriaceae to susceptible ≤2 µg/mL, intermediate ≤4 µg/mL, and resistant ≥8 µg/mL. The laboratory at MHUMC reports MIC ≤8 µg/mL as susceptible in line with the 2009 breakpoint. Verification of these breakpoints is costly, and there is concern that there will be increased use of broad-spectrum antibiotics. The impact of this discrepancy remains unclear, so further investigation was warranted.

Methodology: This was a single-center, retrospective chart review that included patients who had a positive non-urine culture for Enterobacteriaceae and received cefazolin. Patients with an MIC ≤2 µg/mL were compared to those with an MIC >2 µg/mL. The primary outcome was clinical response. Secondary outcomes included length of therapy, hospital length of stay (LOS), intensive care unit LOS, and rate of readmission within 30 days.

Results: Eighteen patients were included with 14 in the MIC ≤2 µg/mL group and 4 with an MIC >2 µg/mL. For the primary outcome, the difference between the two groups was not statistically significant, as there were no treatment failures in either group. For the secondary outcomes, the group with higher MIC had a shorter length of therapy, hospital LOS, and a statistically significant shorter ICU LOS. The group with lower MIC also had higher rates of readmission.

Conclusions: The difference in outcomes between the two groups was insignificant and prescribing practices do not seem to be affected by reporting MIC ≤8 µg/mL as susceptible. The results from our study suggest that the use of cefazolin for non-urinary Enterobacteriaceae infections is uncommon practice at MHUMC.

Objective: To compare outcomes of patients treated with cefazolin for an Enterobacteriaceae with a minimum inhibitory concentration (MIC) ≤2 µg/mL and >2 µg/mL.

Self Assessment Question: Are there negative outcomes for patients treated with cefazolin for an Enterobacteriaceae with an MIC >2 µg/mL?

11:15am – 11:30am O **113 - Gemcitabine with Carboplatin in Metastatic Breast Cancer: Characterizing and Predicting Outcomes in a Modern, Real-world Population** Room E

Presenters: Jordyn Higgins

Gemcitabine with Carboplatin in Metastatic Breast Cancer: Characterizing and Predicting Outcomes in a Modern, Real-world Population

Jordyn Higgins, Kristina F. Byers, Christine Davis, Meagan Barbee
EUHM1 Emory University Hospital Midtown

Background: Metastatic breast cancer (MBC) remains incurable, with a 5-year survival rate of 27.4%. Due to the natural course of the disease, a majority of MBC patients will eventually experience widespread metastases, visceral crises, or severe organ dysfunction. Patients routinely exhaust multiple lines of anticancer therapy, and the use of salvage regimens are often limited due to organ dysfunction. Gemcitabine in combination with carboplatin (G/C) is a salvage regimen used in MBC. It is often selected for patients with brain metastases, liver failure, and/or renal failure due to unique aspects of drug metabolism and penetration.

The specifics of G/C in MBC are not well-characterized in the literature and are limited to the clinical trial setting, which often excludes patients in which this regimen is utilized in the real-world. Data demonstrating the safety and efficacy of G/C in MBC is limited to small, phase II trials, with drug dosing and scheduling varying from trial to trial. A majority of the studies excluded patients who received anthracycline or taxane based regimens for early treatment of breast cancer, received prior treatment for MBC, possessed non-stable brain metastases, or experienced organ dysfunction. Finally, data regarding the efficacy of G/C amongst different tumor histologic subtypes is lacking.

Methodology: A retrospective chart review will be conducted on all adult (> 18 years old) patients with MBC who received at least one dose of G/C in the inpatient or outpatient settings at Emory Healthcare / Winship Cancer Institute from December 1, 2005 to November 29, 2018. Patients will be excluded if received an additional antineoplastic agent (except for trastuzumab/pertuzumab), pregnant, enrolled in clinical trial at time of G/C administration, and/or treatment course administered at outside facility. Patients will be grouped according to receptor status (HR+, TN, and HER2+), and outcomes between the groups will be analyzed.

Results: The primary outcome is progression-free survival (PFS) stratified by receptor status and of the total cohort. Secondary outcomes are overall survival (OS) stratified by receptor status, safety (defined as hospitalizations related to G/C therapy and neutropenia), regimen tolerability (presence of dose/schedule change, growth factor support, transfusion support), predictors of PFS and OS, and dose characterization. See presentation.

Conclusions: See presentation.

Objective: To assess real-world outcomes in patients with metastatic breast cancer who received treatment with gemcitabine and carboplatin

Self Assessment Question: Which of the following is NOT associated with decreased survival outcomes?

To view the audio/visual presentation, please select "from beginning" under the "slide show" tab in Microsoft Power Point.

11:15am – 11:30am O **114 - Impact of Pharmacist Driven Patient Risk Assessment on Incidence and Severity of Ifosfamide Induced Neurotoxicity** Room F

Presenters: Gabriel Hinojosa

Impact of Pharmacist Driven Patient Risk Assessment on Incidence and Severity of Ifosfamide Induced Neurotoxicity

Gabe Hinojosa, Justin Laporte, Megan Freeman, Sarah Murphy
NHAG2 Northside Hospital (Oncology)

Background: Ifosfamide is commonly used as monotherapy or in combination with other chemotherapeutics for the treatment of a wide array of pediatric and adult malignancies including lymphomas, sarcomas, head and neck, testicular and gynecologic cancers. Ifosfamide induced neurotoxicity (IIN) is a dose limiting toxicity occurring in 10%-30% of patients as a result of the accumulation of neurotoxic metabolites. The severity and presentation of IIN ranges dramatically from decreased alertness to hallucinations and seizures. Studies have been published identifying potential risk factors for IIN; however, at this time a standardized protocol to prevent IIN in high risk patients has not been published. The purpose of this evaluation is to assess the impact of a pharmacist driven risk assessment and protocol on the prevention of IIN.

Methodology: An evidence based patient risk assessment and protocol was developed by oncology pharmacists and physicians. A retrospective chart review was then performed on two groups of patients; those who received ifosfamide prior to implementation of preventative protocol and those who received treatment after protocol implementation. Data was reviewed to characterize common risk factors and compare the incidence and severity of neurotoxicity between cohorts.

Results: 7 (17.5%) of the 40 patients in the pre-implementation experienced ifosfamide induced neurotoxicity. 116 cycles of chemotherapy were reviewed among these 40 patients, with a total of 10 cycles resulting in neurotoxicity. Data collection and review in the post-implementation group is currently underway.

Conclusions: Preliminary data revealed incidence of ifosfamide induced neurotoxicity within the range previously reported in literature. Risk factors exhibited in pre-implementation group were consistent with those reported in literature.

Objective: Describe risk factors associated with ifosfamide induced neurotoxicity and preventative measures that may be effective to lower incidence and severity of IIN.

Self Assessment Question: Which preventative measures may be effective in reducing the incidence and severity of ifosfamide induced neurotoxicity?

https://www.youtube.com/watch?v=8CtytFJrNvE

11:15am – 11:30am O **120 - Implementation and Evaluation of Criteria for Inpatient versus Outpatient Chemotherapy Administration at an Academic Medical Center** Room L

Presenters: Bernard Hsia

Implementation and Evaluation of Criteria for Inpatient versus Outpatient Chemotherapy Administration at an Academic Medical Center

Bernard M. Hsia, Joshua Wyche, Carolyn Braithwaite, Katherine Saunders
AUMC1 Augusta University Medical Center/ University of Georgia College of Pharmacy

Background: Historically, chemotherapy was given inpatient due to schedule, administration, and toxicity. Due to advancements in cancer treatment and adverse effect management, most regimens can now be given outpatient. Given limited bed availability at a medium-sized academic medical center and differences in reimbursements between these settings, outpatient chemotherapy administration is preferred. Two regimens were identified for transition to outpatient: ICE (ifosfamide with mesna, carboplatin, etoposide) and AIM (doxorubicin, ifosfamide, mesna). The objectives of this study are to evaluate the feasibility of moving these regimens outpatient, create patient eligibility criteria for outpatient administration, and assess financial impact from the transition.

Methodology: A single center retrospective chart review was conducted of patients who received ICE and AIM from July 1, 2018, through July 1, 2019. Data regarding diagnosis, number of cycles, medication doses, chemotherapy complications, and length of stay were collected. This information, including a literature search on risk factors for severe reactions, was used to create eligibility criteria for outpatient treatment. Medication doses and length of stay data determined potential drug costs and hospital days saved, respectively.

Results: Twenty-one patients (16 ICE, 5 AIM) were reviewed. After applying eligibility criteria, 5 ICE and 2 AIM patients were eligible to receive outpatient treatment, representing 19 unique cycles. Outpatient administration could have reduced medication costs by $1,711.41 and $3,960.76 for ICE and AIM, respectively. Transitioning to outpatient would have saved 67 hospital days.

Conclusions: Creating appropriate eligibility criteria allows for safe and effective administration of traditionally inpatient chemotherapy in the ambulatory setting. Savings and revenue can be generated through lower drug costs with 340B pricing, additional insurance reimbursement for outpatient infusions, and fewer scheduled admissions.

Objective: Describe the process required for moving appropriate chemotherapy regimens from the inpatient to the outpatient setting.

Self Assessment Question: What are important factors to consider when transitioning chemotherapy regimens to the outpatient setting?

Please view presentation here: https://vimeo.com/410286220

11:15am – 11:30am T **112 - Pharmacist-Led Education in Acute Asthma Exacerbation to Prevent Return Visits to the Pediatric Emergency Department** Room D

Presenters: Kiah Hicks

Pharmacist-Led Education in Acute Asthma Exacerbation to Prevent Return Visits to the Pediatric Emergency Department

Kiah Hicks, Dana Jackson, Vickie Malloy
CFVM Cape Fear Valley Medical Center

Background: Compare 30-day asthma-related return visits to the pediatric emergency department (PED) for patients who received pharmacist intervention plus standard of care vs patients who received standard of care only.

Methodology: Eligible participants were patients ages 4 – 17 years old presenting to the PED for mild or moderate asthma exacerbations. Patients were excluded if they had severe presentations, required hospitalization, had a history of other bronchopulmonary comorbidities, an exacerbation cause by an infectious pathogen, or if patients had a medical history of advanced asthma controller medications. Pharmacist consults were ordered by PED providers and consisted of education on rescue and controller inhalers, inhaler technique, and the asthma action plan. Patients were called 31- and 61-days after their initial visit to verify revisits and answer additional questions.

Results: 28 patients received the pharmacist intervention compared to 155 patients that would have qualified for the intervention. There were 5 (17.9%) 30-day return visits in the intervention group compared to 8 (5.2%) in the control group (P=0.0298). The intervention group had 1 (3.6%) revisit in the 31-60-day timeframe compared to 11 (7.4%) in the control group (P=0.237). The average time patients spent in the PED was 143.0 $\pm$ 64.7 minutes in the intervention group compared to 141.0 $\pm$ 80.8 minutes in the control group (P=0.8884, 95% Confidence Interval -26.0, 29.9).

Conclusions: Pharmacist education in the PED did not significantly impact 30-day asthma-related return visits and the time patients spent in the PED was not impacted by pharmacist education.

Objective: Explain how pharmacists can impact asthma care in the pediatric emergency department.

Self-Assessment Question: How can pharmacists be involved in asthma education in the pediatric emergency department setting?

Audio-visual presentation link: https://www.youtube.com/watch?v=aQzufM8ekIY

11:15am – 11:30am 1 **116 - Characterization of Renal Transplant Donor and Recipient Opioid Use in the Inpatient versus the Outpatient Setting** Room H

Presenters: Meredith Holt

Characterization of Renal Transplant Donor and Recipient Opioid Use in the Inpatient versus the Outpatient Setting

Meredith Holt; Adam Dodson; Kris Gutierrez

UAHB1 University of Alabama at Birmingham Hospital

Background: In the United States, opioid misuse is an epidemic. Literature is limited, but suggests that patients receiving transplants are a population at risk for opioid misuse. In one study of patients with the highest level of pre-transplant opioid use, 60% continued high-level use post-transplant (Lentine, et al.). Another study found correlations between death and graft loss in chronic opioid using renal transplant patients, making utilization of opioids an important consideration in patient success (Abbott, et al.). Currently at UAB Hospital, the majority of renal transplant donors and de novo recipients are discharged with an opioid prescription for pain management. However, some centers do not routinely utilize opioids in this population upon discharge in an effort to minimize opioid exposure. In consideration of the opioid epidemic and the potential deleterious effects on renal transplant outcomes with chronic opioid use, this retrospective review study aims to further describe opioid prescribing patterns in renal transplant donors and recipients.

Methodology: A retrospective chart review was conducted for patients donating or receiving kidney transplantation from June 1, 2017 to June 30, 2018. All patients greater than 18 years of age were eligible for inclusion. Patients were excluded if they had a history of solid organ transplantation or if they received multi-organ transplantation. Data points collected included demographics, length of stay, opioid usage prior to transplant/donation, cumulative inpatient opioid usage, opioid usage 24 hours prior to discharge, and opioid prescribing at discharge. For kidney transplant recipients, a medication list audit was conducted at one, three, six, and twelve months post-transplant to assess for continued opioid usage.

Results: One hundred fifty patients were included in the IRB-approved study. Total inpatient oral morphine equivalent (OME) usage for living donor recipients resulted in a median of 40 (IQR 46) vs 49.50 (IQR 58) for deceased donor recipients. OME usage 24 hours prior to discharge in living donor recipients was 2.89 ± 4.2 vs 4.64 ± 8.7 (p value 0.794). Discharge prescription OMEs were about 30 for both groups, and days supply was about 6 days for both groups. The Spearman rank correlation coefficients for living donor recipients, deceased donor recipients, and living donors were 0.25, 0.15, and -0.24, respectively, with none of them being significant.

Conclusions: Inpatient opioid use was not significantly different between living donor recipients and deceased donor recipients. It does not appear that outpatient discharge prescriptions were based on what was used during the 24 hours prior to discharge.

Objective: Describe inpatient opioid usage and discharge prescription requirements for renal transplant donors and de novo recipients at an academic medical center.

Self Assessment Question: Based on this research, did a difference exist in inpatient opioid usage between recipients of living and deceased donor kidney transplants?

11:30am – 11:45am A **123 - Impact of an electronic health record driven prescription integrity strategy at an integrated health-system specialty pharmacy** Room C

Presenters: Ryan Hughes

Impact of an electronic health record driven prescription integrity strategy at an integrated health-system specialty pharmacy

Ryan Hughes, Lisa Blanchette, Brittany Meilinger
NHP12 Novant Health Presbyterian Medical Center (Administration and Leadership with Masters)

Background:Specialty pharmacy is a growing subset of pharmacy practice focused on the care of patients with chronic and complex disease states. In 2013, Novant Health established its first specialty pharmacy in Winston-Salem, North Carolina and now has now expanded to three locations. Novant Health utilizes a single electronic health record platform shared across clinics, hospitals, and specialty pharmacies to improved medical record transparency and improve efficiency of a specialty pharmacy process when providing care for patients. The purpose of this study was to increase prescription capture rate while maintaining or improving medication turn-around time, quality of care, and patient satisfaction.

Methodology: A retrospective chart review was conducted pre and post implementation of the MSOT process at a single rheumatology practice. MSOT functionality consists of the provider ordering an MSOT-eligible prescription which results in the generation of an in-basket message to the medication management specialist (MMS). Disease modifying anti-rheumatic drugs (DMARDs) were included as MSOT eligible prescriptions. Working with the clinic, the patient, and the pharmacy benefits manager, the MMS review the ordered medication for any authorization or financial assistance needs and discuss benefits of using the Novant Health specialty pharmacy to fill their prescription. All authorization requirements are resolved prior to releasing the prescription to the patient’s preferred pharmacy.

Results: Twenty-nine percent versus 28% of prescriptions were captured by Novant Health pre- and post-MSOT implementation, respectively. The median turn-around time of specialty prescriptions reduced by approximately three hours after MSOT implementation.

Conclusions: MSOT implementation may result in reduce prescription turn-around time. It also provied clarity for uncaptured medication reasons for future interventions. However, it remains uncertain if MSOT has an impact on clinical progression or prescription revenue.

Objective: Assess the impact of a multi-step order transmittal process (MSOT) process on specialty prescription capture rate, understand the reasons for medications not captured within MSOT, and evaluate its impact on medication turnaround time, clinical outcomes achieved, and prescription revenue accrued.

Self Assessment Question: Did implementation of a MSOT process increase prescription capture rate?

11:30am – 11:45am B **124 - Analysis of the safety and efficacy of apixaban use in the obese patient population** Room D

Presenters: Christine Ikekwere

Analysis of the safety and efficacy of apixaban use in the obese patient population
Christine Ikekwere, Kate Miller, Brittany Denning, Lakeshea Love
SRMC1 Southeastern Regional Medical Center
Background: The CHEST guidelines recommend direct oral anticoagulants over warfarin in qualifying patients with non-valvular atrial fibrillation (NVAF) due to their significant efficacy in stroke and venous thromboembolism (VTE) prevention and a lower risk of major bleeding. The International Society on Thrombosis and Haemostasis does not support their use in patients weighing > 120 kg and/or a body mass index (BMI) > 40 kg/m2 due to limited data in this population, concern of decreased drug exposure, and risk of underdosing. To determine the correlation between obesity and treatment failure we investigated clinical outcomes of stroke, VTE, and clinically documented bleeding in obese patients on apixaban at SRMC.
Methodology: Patients were randomly identified from the electronic medical record from November 1, 2017 to June 30,2019. Inclusion criteria were age 18 or older and patients currently taking apixaban for the indication of NVAF. Exclusion criteria were apixaban for indications other than NVAF, a weight < 50 kg, or patients on the psychiatric, obstetric, or labor units. A total of 256 patients were classified as either weight > 120 kg and/or BMI > 40 kg/m2 or weight ≤ 120 kg and BMI ≤ 40 kg/m2 and their profiles were evaluated for demographic information and documentation of bleeding events. The two groups were then compared for the primary efficacy outcome of treatment failure, defined as VTE or stroke, and the primary safety outcome, defined as clinically documented bleeding events.
Results: In progress
Conclusions: In progress
Objective: Identify if there is a significant difference in the rate of thromboembolic and bleeding events in patients on apixaban weighing > 120 kg and/or BMI > 40 kg/m2 versus those weighing ≤ 120 kg and BMI ≤ 40 kg/m2.
Self Assessment Question: Is there an increased rate in thromboembolic events in NVAF patients on apixaban weighing > 120 kg and/or BMI > 40 kg/m2?

11:30am – 11:45am B **129 - Implementation of an emergency department acute gouty arthritis treatment order set**

Presenters: Kevin Joly-Brown Room I

Implementation of an emergency department acute gouty arthritis treatment order set
Kevin Joly-Brown and Denise Ross
AVAH1 Atlanta Veterans Affairs Health Care System
Background: Previous studies have shown that gout is often inappropriately managed, resulting in significant and avoidable healthcare costs. The Atlanta VA Health Care System emergency department currently treats a high number of patients for acute gout but does not have an electronic order set available to guide appropriate prescribing.
Methodology: This project is a retrospective cohort study comparing patients prior to and after the establishment of an acute gouty arthritis treatment ordering menu. This study will be submitted to the Institutional Review Board for approval. An acute gouty arthritis order set will be created and implemented after feedback from a multidisciplinary team. The order set will incorporate treatment recommendations from the 2012 American College of Rheumatology gout treatment guidelines. The electronic medical record system will identify patients who have been seen in the emergency department with a primary diagnosis of acute gouty arthritis. The date range will include patients prior to and after order set implementation. The following data will be collected: patient age, gender, ethnicity, physical exam findings, renal function tests, hepatic functions tests, gout severity, and pharmacologic therapy for chronic and acute gout. All data will be recorded without patient's identifiers and maintained confidentially.
Results: "In Progress"
Conclusions: "In Progress"
Objective: At the conclusion of my presentation, the participant will be able to assess the appropriateness of acute gouty arthritis management in the emergency department before and after implementation of a treatment order set.
Self Assessment Question: Can an electronic order set be used to guide therapy for acute gouty arthritis in an emergency department setting?

11:30am – 11:45am B **132 - Improving communication regarding community coordinated care prescriptions at a Veterans Affairs Medical Center** Room L

Presenters: Amanda Karels

Improving communication regarding community coordinated care prescriptions at a Veterans Affairs Medical Center

Amanda Karels, Jessica Holleman, Erin Amadon
FVMC1 Fayetteville VA Medical Center

Background: To standardize communication between Veterans Affairs pharmacists and community providers for prescriptions requiring extended review.

Methodology: An electronic health record template was created to amalgamate documentation and communication for community care prescriptions that required clarification or prior authorization. Pharmacy staff received training on how to generate, populate, and transmit this template to community care providers. This impact evaluation retrospectively analyzed the average prescription processing time for three months prior to and following implementation of the standardized template. The primary endpoint was the change in average processing time for community care prescriptions requiring extended review. Secondary endpoints included the change in percentage of clarification faxes sent to community providers, stratified by request category type.

Results: A total of 236 prescriptions were included in data collection. The pre-implementation average prescription processing time was 12.15 days and was shown to increase by 4.76 days after standardization. The percentage of faxes to community providers that included appropriate criteria increased by 31%, and the percentage of faxes requesting medical records increased by 95%. The percentage of faxes that included appropriate formulary alternatives increased by 23.1%. Lastly, the percentage of prescription receipt notes documented in the medical record improved by 30.9%.

Conclusions: Implementation of a standardized communication template for community care providers did not improve prescription processing time. The lack of improvement was due, in part, to incomplete data and implementation of the VA Mission Act mid-project. However, standardization was shown to have a positive impact on receipt of medical record documentation and prior authorization information request accuracy.

Objective: Describe the potential advantages and limitations of implementing standardized communication and documentation.

Self Assessment Question: What is one benefit to using a standardized communication template?

https://youtu.be/YksiFobI9Vc

11:30am – 11:45am C **128 - Impact of Standardized Patient Evaluation and Recommendation Process on Statin Therapy Initiation Rates** Room H

Presenters: Kimberly Johnson

Impact of Standardized Patient Evaluation and Recommendation Process on Statin Therapy Initiation Rates

Kimberly A. Johnson, Joshua D. Kinsey, Erin C. Aviles, Lynn B. Marshall
MUAG1 Mercer University College of Pharmacy

Background: Per the 2018 Multisociety Guideline on the Management of Blood Cholesterol, patients with clinical ASCVD, diabetes and certain risk factors and risk enhancers are at higher risk for developing atherosclerotic cardiovascular disease. Statin therapy not only lowers cholesterol levels but also has the benefit of reducing the number of major cardiovascular events in these patient groups. In 2015, the Patient and Provider Assessment of Lipid Management (PALM) Registry surveyed over 5600 statin-eligible adults and documented that over 26% were not on treatment. Of those, nearly 60% report never being offered a statin, 30% discontinued treatment, and 10% declined treatment. The fear of side effects and perceived side effects were the most common reasons for declining or discontinuing a statin.

Methodology: Eligible patients are those between the age of 40 and 75 who are currently taking medications for diabetes or medications with cardiovascular indications and are not on statin therapy. Participants in the control group received information and a recommendation per current best practice. Participants in the intervention group received a structured, verbal survey-based evaluation, education and recommendation. Their acceptance in initiating statin therapy was assessed and a request sent to their provider. The primary outcome is the change of initiation rates of statin therapy.

Results: In Progress

Conclusions: In Progress

Objective: To assess a standardized patient evaluation, education, and recommendation process and its impact on statin use in patients with diabetes or cardiovascular disease

Self Assessment Question: What are three barriers for pharmacists in the community setting to initiating statin therapy in eligible patients?

LINK TO PRESENTATION: https://youtu.be/4FtaDj4jHmE

11:30am – 11:45am C **130 - Safety and Efficacy of Sotalol in Patients with Left Ventricular Hypertrophy** Room J

Presenters: Justin Joy

Safety and Efficacy of Sotalol in Patients with Left Ventricular Hypertrophy

Justin Joy, Kristen Bova Campbell, Sean Pokorney

DUHC2 Duke University Hospital (Cardiology)

Background: The 2014 AHA/ACC/HRS guidelines for the management of atrial fibrillation (AF) limit antiarrhythmic drug options to dofetilide, sotalol, amiodarone, and dronedarone for patients with structural heart disease. Options are further restricted in patients with left ventricular hypertrophy (LVH), as the guidelines specifically state that dofetilide and sotalol are not recommended in patients with SWT (septal wall thickness) > 1.5 cm. However, there is a paucity of clinical data to support these recommendations and the 2017 AHA/ACC/HRS guideline for management of ventricular arrhythmias do not share the same caution with sotalol in patients with LVH. This poses a significant challenge in management, as there are patients who may benefit from sotalol due to the risk of many of the long term adverse effects of alternative agents.

Methodology: This is a retrospective, observational cohort study. Patients included will be adults admitted for sotalol initiation between September 1, 2016 and December 31, 2019 with physician interpreted corrected QT intervals (QTc) performed before, during, and after sotalol initiation with echocardiographic evidence of LVH. The primary endpoint is the absolute and percent increases in QTc interval (ms) after the first and fifth doses of sotalol, as compared to a control group without LVH. Secondary endpoints include re-hospitalizations due to arrhythmia within 12 months, incidence of any cardiac adverse events, and rate of failed sotalol load. 210 potential subjects are being screened for initial inclusion.

Results: In progress

Conclusions: In progress

Objective: Understand the clinical impact of left ventricular hypertrophy on the safety and success of sotalol initiation.

Self Assessment Question: True or False: Current guideline recommendations advising against sotalol for the management of AF in patients with LVH are primarily based on randomized controlled trials

Presentation Link: https://www.youtube.com/watch?v=zF8VuneRA3I

11:30am – 11:45am R **125 - Evaluation of Large Fluid Resuscitation in Critically Ill Septic Patients** Room E

Presenters: Ebose Ikheloa

Evaluation of Large Fluid Resuscitation in Critically Ill Septic Patients
Ebose Ikheloa, Jeremy Hodges, Laura Frantz
NHFM1 Novant Health Forsyth Medical Center

Objective: Compare the rate of hyperchloremic metabolic acidosis and incidence of acute kidney injury (AKI) from balanced crystalloid versus normal saline in critically ill septic patients
Background: In patients with septic shock, large fluid resuscitation is required along with vasopressors to maintain blood pressure and end organ perfusion. Normal saline is the most commonly used resuscitation fluid, but has been associated with hyperchloremia, acidosis, and acute kidney injury (AKI). Alternative fluids containing lower concentration of chloride, called balanced crystalloids, are available. The purpose of this study is to compare normal saline resuscitation versus balanced crystalloid resuscitation in patients with septic shock.
Methods: A retrospective chart review of medical records from January 1, 2017 to August 31, 2019 was performed on 58 critically ill septic patients who received normal saline or Isolyte S pH 7.4 for large fluid resuscitation in the intensive care unit (ICU). Patients 18 years of age and older, with a diagnosis of sepsis/septic shock, and received at least 30 ml/kg of fluid resuscitation were included. Exclusion criteria were end stage renal failure with or without dialysis prior to ICU admission or history of kidney transplant. The primary endpoint was peak change in chloride level from baseline. Secondary endpoints included cumulative volume, hyperchloremia, ICU length of stay, ICU all-cause mortality, need for renal replacement therapy (RRT), chage in renal function and arterial blood gas (pH, bicarb and anion gap).
Results: In the first seven day of fluid resuscitation, there was no difference in peak change in chloride level from baseline in the control group vs. the balanced group (10 vs. 9 mmol/L, p= 0.849). Of the included patients, two had an incidence of non-anion gap hyperchloremic acidosis in the control group vs. one patient in the balanced group. The overall median ICU length of stay was 7 days (range 1-40) in the control group vs. 9 days (range 1-32) in the balanced group (p= 0.079). Two patients (6.9%) in the control group and 4 patients (13.8%) in the balanced group needed new RRT during ICU stay.
Conclusion: The use of balanced crystalloids in comparison to normal saline did not appear to significantly lower the incidence of non-anion gap hyperchloremic acidosis. However, the peak change in serum creatinine was significantly higher in the control group compared to the balanced group. There were no significant differences with other secondary objectives.
Self Assessment Question: Which is not a potential adverse effect of large fluid resusciation with normal saline in critically ill septic patients?

https://www.youtube.com/watch?v=NKNo0IMR3OE&feature=youtu.be

11:30am – 11:45am R **126 - Glycemic control in patients with a necrotizing skin and soft tissue infection** Room F

Presenters: Austin Ing

Glycemic control in patients with a necrotizing skin and soft tissue infection

Austin Ing, Lauren Stiehle, Kelli Rumbaugh
VUMC1 Vanderbilt University Medical Center

Background: Necrotizing Fasciitis is a rapidly progressing infection with high rates of mortality and morbidity. Hyperglycemia has been shown to deter wound healing and contribute to infectious processes. One prior study assessed disease progression and death in patients with necrotizing fasciitis who achieved early glycemic control (EGC) against those who did not. The lack of benefit seen with EGC was likely secondary to a limited sample size. The current study looks to build off prior literature with a primary outcome of debridement rates in those who achieve EGC compared to those who do not.

Methodology: We performed a retrospective cohort study of patients 18 years or older who were admitted to Vanderbilt University Medical Center (VUMC) with ICD 10 / CPT codes indicated for necrotizing skin soft tissue infections between January 2010 and October 2019. Keeping with the definition of Beauchamp et al, early glycemic control was defined as a daily average blood glucose concentration ≤150 mg/dL for a minimum of two consecutive days from admission to hospital day three. The primary outcome of our study was debridement rates in those who achieve EGC compared to those who do not. Secondary outcomes of these groups include mortality, readmission for complications of NSSTI, incidence of hypoglycemia, discharge disposition, and length of stay in the hospital and intensive care unit. Time to glycemic control, duration of glycemic control, and average daily blood glucose (ADBG) throughout hospital stay were evaluated to assess for a correlation to debridement rate.

Results: Of the 213 patients with necrotizing fasciitis of Founier's gangrene, 132 acheived EGC while 81 did not. The two groups had similar characteristics at baseline with majority being white males at a median age of 50. The median debridement rate in both groups was 2 (P=0.243). Mortality, number of amputations, readmissions, and patient disposition were all unaffected by early glycemic control. Time to glycemic control was significanlty greater in the No-EGC group (4.5 days vs. 1 day; P<0.001) and a subsequent multvariate analysis revealed that for every day glycemic control was not achieved the patient was at risk for 0.28 debridements (P<0.001;β=0.28). Despite longer durations of glycemic control in the EGC group (9.4 days vs. 5.8 days; P<0.001) and lower ADBG (121 mg/dl vs. 148 mg/dl; P<0.001), these variables were not well correlated with number of debridements. The average number of hypoglycemic events experienced in each group was similar (0.96 vs 1.5; P=0.386)

Conclusions: EGC does not have an effect on the number of debridements in NSSTI. Outcomes are not significantly impacted by average daily blood glucose or duration of glycemic control. Time to glycemic control appears to play a role in the number of debridements these patients recieve. Future directions for glyceimc control in NSSTI should evaluate the effect of managing blood sugar outside the bounds of EGC.
Objective: Explain the effect of glycemic control on the rate of debridement in patients with necrotizing skin soft tissue infections.
Self Assessment Question: Does early glycemic control in patients with necrotizing skin infections effect the total number of debridements the patient may experience?

11:30am – 11:45am R **127 - Evaluation of Procalcitonin Utilization as a Marker of Infection in the Emergency Department** Room G

Presenters: Lauren Jacobs

Evaluation of Procalcitonin Utilization as a Marker of Infection in the Emergency Department
Lauren Jacobs, Kristen Womble-Smith
SRMC2 Southeastern Regional Medical Center (Emergency Medicine)
Background: Procalcitonin is a biomarker that serves as a diagnostic tool to aid in the identification of a bacterial infection. Although recent literature has shown procalcitonin to reduce antibiotic exposure and related side-effects in patients with acute respiratory infections, it has also shown procalcitonin's diagnostic accuracy in systemic infection to be imperfect. Evidence is insufficient to draw conclusions on outcomes of procalcitonin guidance in certain populations. Therefore, procalcitonin should not be used in the following patients: recent massive stress (i.e. trauma, surgery, cardiogenic shock, or burns), transplant on immunosuppressants, recent treatment with agents which stimulate cytokines, chronic infections, renal dysfunction (i.e. chronic kidney disease, end-stage renal disease on dialysis), myocardial infarction, infections for which prolonged antibiotic therapy is the standard of care (i.e. osteomyelitis, infective endocarditis), paraneoplastic syndromes due to medullary thyroid and small cell lung cancer, and pregnancy. Currently, Southeastern Regional Medical Center (SRMC) does not have a protocol guiding procalcitonin use, which may lead to unnecessary procalcitonin assay orders, treatment with antibiotics, and/or delay in appropriate therapy.
Methodology: This study will be comprised of two parts and will evaluate patients admitted to SRMC via the emergency department (ED) with an initial procalcitonin assay. Patients were included if they were at least 18 years old. Phase I will be a retrospective review from January 1, 2019 to March 31, 2019. Phase II will be conducted from January 1, 2020 to March 31,2020 after providing education to ED physicians regarding appropriate procalcitonin assay utilization. The primary outcome measure will be the percentage of appropriate procalcitonin assays. Additionally, duration of antibiotic therapy, facility cost, and patient cost will be collected.
Results: In Progress
Conclusions: In Progress
Objective: Identify appropriateness of procalcitonin assay utilization in an emergency department
Self Assessment Question: In what patient is an initial procalcitonin assay appropriate?

11:30am – 11:45am R **131 - Prevalence of sleep-promoting medication continuation at transition out of the ICU setting**

Presenters: Ashley Kamp Room K

Prevalence of sleep-promoting medication continuation at transition out of the ICU setting

Ashley Kamp, Jana Sigmon, Shawn Kram, Bridgette Kram
DUHD1 Duke University Hospital

Background: Critically ill patients experience abnormal sleep in the intensive care unit (ICU), which may predispose to the development of ICU delirium and increased duration of mechanical ventilation, ICU length of stay, and mortality. Despite the frequent utilization of medications to facilitate sleep in the ICU, consensus guidelines do not provide specific recommendations regarding their use due to a lack of evidence. Previous studies have demonstrated the risk for polypharmacy and continuation of certain medications initiated in the ICU as patients transition out of this setting. The purpose of this study is to determine the rate of continuation of sleep-promoting medications initiated in the ICU at hospital discharge.

Methodology: Adult patients ≥18 years of age admitted to an ICU between July 1, 2018 and June 30, 2019 who received a newly initiated sleep medication were included in this single-center, retrospective cohort study. Specific medications evaluated in this study included: sedating atypical antipsychotics olanzapine, quetiapine, and risperidone; antidepressants mirtazapine and trazodone; and non-benzodiazepine sedative hypnotics zaleplon and zolpidem. Exclusion criteria were continuation of a documented home sleep medication, initiation for an indication other than sleep, or death in the ICU. The primary endpoint is the proportion of hospital survivors discharged with a new prescription for a sleep medication. Secondary endpoints are the proportion of patients discharged to the floor with an active order for a sleep medication, the proportion of patients who received multiple medications simultaneously to facilitate sleep in the ICU, and the proportion of patients who received the maximum recommended dose of a sleep medication in the ICU.

Results: A total of 154 critically ill patients who received sleep-promoting medications were included. Trazodone, quetiapine, and zaleplon were most commonly utilized. Following sleep medication initiation in the ICU, 28.8% of hospital survivors were discharged with a prescription for one of these agents. At ICU discharge, 70.9% of patients were continued on a sleep medication. During their ICU stay, 21.4% of patients received multiple medications for sleep and 5.2% of patients received the maximum recommended dose of a sleep medication.

Conclusions: This study demonstrates the risk for continuation of sleep-promoting medications initiated in the ICU as patients transition out of this setting.

Objective: Describe the prevalence of sleep-promoting medication continuation at transition out of the ICU setting

Self-Assessment Question: Which of the following may be unintended consequences of continuing sleep-promoting medications initiated in the ICU at hospital discharge?

Link to presentation: https://www.youtube.com/watch?v=A_D6yV9za_k&feature=youtu.be

11:30am – 11:45am I **121 - Evaluating hospital length of stay in adults with Enterobacteriaceae bacteremia who were transitioned to oral antibiotics** Room A

Presenters: Kathryn Huelfer

Evaluating hospital length of stay in adults with Enterobacteriaceae bacteremia who were transitioned to oral antibiotics

Kathryn Huelfer, Emilee Robertson, Geneen Gibson, Joey Crosby, Sarah Lopez

SJCH1 St. Joseph's/Candler Health System

Background: Gram-negative bacteremia is a major cause of mortality and morbidity in hospitalized patients. The efficacy of deescalating to oral therapy has been evaluated in bloodstream infections due to the family, Enterobacteriaceae. The primary objective of this study was to determine if hospital length of stay is shorter in adult patients with Enterobacteriaceae bacteremia who were switched to oral (PO) antibiotics versus those who were treated with intravenous (IV) antibiotics only.

Methodology: This study was a retrospective, observational, chart review that evaluated adult patients with Enterobacteriaceae bacteremia, between January 2018 – December 2019, who were either switched to PO antibiotics or remained on IV antibiotics throughout treatment duration. The primary outcome was hospital length of stay. Secondary outcomes included recurrent infection within 30 days of discharge, worsening clinical status during hospitalization and mortality within 30 days of discharge.

Results: Over the two-year period, 415 patients had a positive Enterobacteriaceae blood culture and a total of 204 patients were included in the study. Seventy-one patients were included in the IV only group, while 133 patients were included in the IV to PO group. The IV to PO group was associated with an average reduction of 4.8 days in hospital length of stay compared to the IV only group ($p < 0.0001$).

Conclusions: Patients who were switched to PO antibiotics were associated with a significant reduction in hospital length of stay compared to patients who were maintained on IV antibiotics only for the entire treatment duration.

Objective: Recognize the potential impact on hospital length of stay when patients are switched to oral antibiotics in the treatment of Enterobacteriaceae bacteremia

Self Assessment Question: What class of oral antibiotics is most commonly selected when switching to oral therapy in the treatment of Enterobacteriaceae bacteremia?

LINK TO PRESENTATION:

https://youtu.be/g_ztKFx-9so

11:30am – 11:45am P **122 - Post-Operative Pain Management in Primary Total Knee Arthroplasty: Evaluation of Topical Administration of Compounding Cream** Room B

Presenters: Emily Hugh

Post-Operative Pain Management in Primary Total Knee Arthroplasty: Evaluation of Topical Administration of Compounding Cream

M. O'Neil, T. Smith, E Hugh, C. Rust, L. Harris, H. Botero, E. Heidel

SCSP1 South College School of Pharmacy

Background: Evaluate the pain management and opioid utilization effects of topical combination analgesics in post operative total knee arthroplasty patients

Methodology: A randomized, double-blind placebo-controlled trial. Eligible patients are those undergoing single total knee arthroplasty (TKA) with a primary diagnosis of osteoarthritis. Participants will be randomized to either the treatment arm, where they will receive a compounded multi-agent pain cream, or the placebo arm, where they will receive a placebo cream. Both arms will still receive the usual post-operative TKA care. Participants will be given assessments evaluating pain, OTC use, and quality of life before surgery. Post surgery, these assessments plus an opioid symptom distress survey will be administered at weeks 3, 6, and 12 follow up. Additionally, participants will bring their opioid medications to follow-up to be counted.

Results: In progress

Conclusions: In progress

Objective: Describe the effect of topical combination analgesics to reduce post-operative pain and opioid utilization in total knee arthroplasty patients as compared to placebo

Self Assessment Question: What is one area of health care in which compounding can improve patient outcomes?

11:45am – 12:00pm B **135 - Improving blood-pressure monitoring through community-based outreach** Room C

Presenters: Ondrea Kelly

Improving blood-pressure monitoring through community-based outreach

Ondrea Kelly, Jeanna Sewell, Courtney Gamston, Kimberly Braxton-Lloyd
AUPH1 Auburn University Pharmacy Health Services

Background: Based on the disproportionately high rate of hypertension-related death in Lee County, Alabama, an opportunity exists to improve identification and management of hypertension. The primary objective of this project, in accordance with HealthyPeople 2020, is to increase the proportion of adults who have had their blood pressure measured within the last two years and know if their blood pressure is normal or high. Secondary objectives include evaluation of the prevalence of undiagnosed and uncontrolled hypertension compared to state and national estimates. Completion of this project will provide data to inform the expansion of this service.

Methods: Blood pressure screening clinics were offered by pharmacists and pharmacy students to interested adults at Boykin Community Center. Blood pressure was measured and recorded, and participants were counseled according to the American Heart Association hypertension guidelines. Participants received a blood pressure wallet card with written results along with basic risk factor information and lifestyle education. Individuals with elevated blood pressure were referred to further care, as needed. Demographic and risk factor information, blood pressure, time since last screening, and participant awareness of personal blood pressure being in the normal or high category were recorded. Data was reported as descriptive statistics.

Results: A total of 45 screenings were completed. All participants reported having their blood pressure measured in the past 2 years, while 86.7% were able to recall the category. Of participants with hypertension, 62.9% had uncontrolled readings. Eighteen percent were identified as potentially having undiagnosed hypertension.

Conclusions: The rate of undiagnosed hypertension was lower than the national estimate, but the uncontrolled hypertension rate was greater than the national rate.

Presentation Objective: Describe the prevalence of undiagnosed and uncontrolled hypertension in Boykin Community Center patrons.

Self-Assessment: How does the prevalence of undiagnosed and uncontrolled hypertension in Boykin Community Center patrons compare to national prevalence?

11:45am – 12:00pm B **142 - Implementation and impact of a pharmacist-run gout clinic at Carl Vinson Veterans Affairs Medical Center** Room J

Presenters: Keenya Leggette

Implementation and impact of a pharmacist-run gout clinic at Carl Vinson Veterans Affairs Medical Center

Keenya Leggette,Spencer Jones,Cassidy Moses,Kathryn Pruitt, Deborah Hobbs
CVVA1 Carl Vinson VA Medical Center

Presentation Objective: Show a reduction in healthcare utilization/visits in the urgent care clinic for acute gout management.

Self-Assessment Question: What are the challenges your facility may face implementing a pharmacist-run gout clinic?

Purpose/Background: Gout is the most common inflammatory arthritis in the United States with a rise in economic burden and healthcare resource utilization. Despite effective urate-lowering treatment options, there is still a gap in care for gout patients. In fact, there were 42 urgent care visits at the Carl Vinson VA Medical Center (CVVAMC) for gout flares from 2018-2019. Therefore, the purpose of this project is to implement a pharmacist-run gout clinic at the CVVAMC. The ultimate goal is to improve quality of care for veterans diagnosed with gout by optimizing and monitoring urate lowering therapy (ULT) to prevent gout attacks and decrease urgent care visits due to gout attacks.

Methods: Veterans were recruited using a dashboard with a diagnosis of gout noted on their active problem list, with a uric acid level $\geq$ 6, and admission into the urgent care for an acute gout attack between August 1, 2018 and September 20, 2019. Exclusion criteria included Veterans with no active diagnosis of gout, uric acid < 6 mg/dL, end-stage kidney disease, or severe hepatic disease. Education and plan for medication optimization provided. Veterans were then scheduled for a 30-day follow-up with appropriate labs ordered. A note template was created specific to chronic gout management.

Results: After applied inclusion and exclusion criteria, 17 veterans gave consent for clinic enrollment. At baseline the average uric acid level was 8.5 mg/dL. At one-month follow-up, the uric acid levels average at 5.9 mg/dL. Four veterans lost to follow-up. There have been no urgent care visits among the 17 veterans since enrollment.

Conclusion: Implementation of a pharmacist-run gout clinic has shown potential to decrease urgent care visits for acute gout flares.

YouTube link: https://www.youtube.com/watch?v=V5uSkDqYH3I::

11:45am – 12:00pm Y **136 - Assessment of Providers' Knowledge, Willingness, and Barriers to Utilizing Pharmacogenomic Services in Rural Community Pharmacy Settings** Room D

Presenters: Tracy Kitchens

Assessment of Providers' Knowledge, Willingness, and Barriers to Utilizing Pharmacogenomic Services in Rural Community Pharmacy Settings

Tracy Kitchens, Erin Dalton, Jodie Tucker, John Mark Carter

SUSP1 South University School of Pharmacy/Richmond Hill Pharmacy

Background: Assess providers' background knowledge of pharmacogenomics, perceptions of the clinical usefulness of pharmacogenomics, perceived barriers to the utility of pharmacogenomic services, and willingness to work with a community pharmacist to implement pharmacogenomic services in two rural community pharmacy settings.

Methodology: This prospective, survey-based research study included physicians, physician assistants, and nurse practitioners serving patients in the two rural community pharmacy settings of Richmond Hill, Georgia, and Hinesville, Georgia. The survey was sent electronically for providers to voluntarily and anonymously complete to examine providers' perceptions in the implementation of pharmacogenomic testing services with community pharmacists.

Results: Surveys were disseminated to 37 providers and 8 participant surveys were included in the study (21.6% response rate). Only one participant had no pharmacogenomics education or experience. The majority of the providers had self-directed pharmacogenomics education and most commonly used testing company personnel as sources when interpreting pharmacogenomic test results. Seven participants agreed that collaboration with pharmacists would facilitate in the progress of pharmacogenomic services and were willing to work with a community pharmacist to implement the services. Providers indicated that the pharmacist's role would predominantly consist of educating providers and patients on pharmacogenomics and making medication-related recommendations to providers. The most common barriers identified were lack of compensation, lack of time or resources to educate the patients, and lack of communication.

Conclusions: Although this study showed positive provider attitudes, further studies on the integration of pharmacogenomic services within rural community pharmacy settings may offer insight on overcoming barriers. Educating on the clinical support pharmacists may provide is essential in establishing pharmacist-provider relationships and collaboration in implementing these services.

Objective: Identify potential barriers in the utilization of pharmacogenomic services.

Self Assessment Question: What barriers can community pharmacists address in the utilization of pharmacogenomic services?

11:45am – 12:00pm R **138 - Impact of Balanced Fluids versus Normal Saline on Clinical Outcomes in Patients with Diabetic Ketoacidosis** Room F

Presenters: Kara Kubbs

Link To Video: https://www.youtube.com/watch?v=VUodnXcHMFs

Impact of Balanced Fluids versus Normal Saline on Clinical Outcomes in Patients with Diabetic Ketoacidosis
K Kubbs, R Bakhru, J Pirkle, N Goad, M Kenes, J Beardsley
WFBH1 Wake Forest Baptist Health
Background: Diabetic ketoacidosis (DKA) is an acute complication of diabetes mellitus characterized by hyperglycemia, ketogenesis, and elevated anion gap metabolic acidosis, resulting in severe volume depletion and electrolyte derangements. An essential treatment component involves intravenous fluid (IV) resuscitation. Both Lactated Ringer's solution (LR) and 0.9% or 0.45% sodium chloride solution (saline) are commonly utilized without a clear determination of optimal fluid choice. Studies have demonstrated an increased incidence of adverse kidney events when comparing saline to LR among critically ill patients. Additionally, studies among patients with DKA assessing IV fluid use have shown an increased incidence of hyperchloremia, as well as an association between hyperchloremia and an increased incidence of acute kidney injury (AKI).
Methodology: This is a single-center, retrospective, cohort study included patients admitted to the medical intensive care unit (MICU) or intermediate care unit (IMC) that were treated for DKA from January 2013-August 2019. Patients were excluded if less than 18 years of age, did not meet guideline DKA diagnostic criteria, had pancreatitis, required renal replacement therapy, mechanical ventilation, or vasopressor use, or were transferred from a referring hospital. Based on the majority fluid composition received during DKA treatment, participants were placed into one of two study arms, either saline or balanced fluids. The primary endpoint is the time to final DKA resolution, defined as laboratory resolution and final discontinuation of the insulin infusion. Secondary endpoints include incidence of AKI (upon presentation and in-hospital development), total volume and type of fluid administered, incidence of hyperchloremia, ICU and hospital length of stay, and adherence to the ADA DKA treatment guidelines.
Results: In Progress
Conclusions: In Progress
Objective: To determine the significance of choice of fluid resuscitation on clinical outcomes in patients with DKA.
Self Assessment Question: Did the utilization of balanced fluids, as compared to hyperchloremic fluids reduce AKI present during DKA and improve time to resolution?

11:45am – 12:00pm R **140 - AN EVALUATION OF SMOFLIPID® ON TIME TO ICU DISCHARGE IN PATIENTS RECEIVING PARENTERAL NUTRITION** Room H

Presenters: Anh Le

AN EVALUATION OF SMOFLIPID® ON TIME TO ICU DISCHARGE IN PATIENTS RECEIVING PARENTERAL NUTRITION

Anh Le, Jordan Baxley, Alexis Hatala

PCRM1 Piedmont Columbus Regional Midtown

Background: Adequate nutritional support can aid in augmenting catabolic stress to reduce the pro-inflammatory state seen in critically ill patients. Although intravenous lipid emulsion (ILE) can provide a source of energy, essential fatty acids and membrane structure and function, the traditional Intralipid® is more inflammatory with its soybean-oil base. Smoflipid® is a new ILE formulation that consists of four types of lipids: 30% soybean oil, 30% medium chain triglycerides, 25% olive oil, and 15% fish oil. The purpose of this study is to evaluate whether Smoflipid® decreases time to intensive care unit (ICU) discharge in critically ill patients compared to standard soybean-based Intralipid®.

Methodology: An IRB approved retrospective chart review was conducted from December 30, 2018 to January 1, 2020 for critically ill patients who received Smoflipid® or Intralipid® at all Piedmont Healthcare facilities. Patients were included if they were 18 years and older who were admitted to the ICU for 72 hours or longer, and received 5 days or more of parenteral nutrition (PN). Patients were excluded if they have known hypersensitivity to the active ingredients or excipients of Smoflipid®, baseline serum triglycerides > 1,000 mg/dL, were immunocompromised or taking immunosuppressant therapy. The primary outcome measure in this study was time to ICU discharge, while secondary outcomes were time to hospital discharge, time to termination of mechanical ventilation, mean change in serum triglycerides and liver function, and time to diagnosis of central-line associated bloodstream infection (CLABSI).

Results: In Progress

Conclusions: In Progress

Objective: Describe the impact on length of stay in critically ill patients receiving Smoflipid® compared to Intralipid®.

Self Assessment Question: How does Smoflipid® affect ICU patients compared to Intralipid®?

11:45am – 12:00pm R **143 - Early versus delayed initiation of amantadine in traumatic brain injury** Room K

Presenters: Hannah Leschorn

Early versus delayed initiation of amantadine in traumatic brain injury

Hannah Leschorn, Melissa Sandler, Rondi Gelbard, Emily Durr

GMHA1 Grady Memorial Hospital

Background: The 2018 American Academy of Neurology guideline on disorders of consciousness recommends using amantadine 100-200 mg twice daily for four weeks in patients who are in a vegetative state, unresponsive wakefulness state or minimally conscious state initiated between four and sixteen weeks post injury to speed functional recovery. The impact of amantadine in the acute phase of traumatic brain injury (TBI) remains unknown.

Methodology: This was a single-center, retrospective, medical record review of all patients with TBI admitted to the surgical ICU between January 1, 2018 and December 31, 2018 who received at least one dose of amantadine. The primary objective was to evaluate the impact of early (≤ 7 days) versus delayed (≥ 14 days) amantadine initiation after TBI on ICU length of stay. Secondary objectives included hospital length of stay, duration of mechanical ventilation, and functional recovery as well as to assess prescribing patterns of amantadine.

Results: A total of 62 patients (48 patients in the early start group, 14 in the delayed start group) were included in the analysis. The average ICU length of stay, hospital length of stay, and duration on mechanical ventilation were less in the early start group (17.7 vs. 41.4 days, $p < 0.001$, 34.1 vs. 70.0 days, $p = 0.004$, 14.4 vs. 36.7 days, $p < 0.001$, respectively). There were no significant differences between median Glasgow Coma Score and Glasgow Outcome Score at day 28 or discharge. Amantadine initial daily dose, dose adjustments, and discharge prescriptions were similar between the two groups.

Conclusions: Early initiation of amantadine after TBI is associated with reduction in ICU and hospital length of stay.

Objective: Compare the timing of amantadine initiation on clinical outcomes in patients with acute TBI

Self Assessment Question: What are the advantages of initiating amantadine within 7 days of TBI?

11:45am – 12:00pm | **133 - Extended Duration of Clostridioides difficile Infections (CDI) Treatment in Hematology/Oncology Patients Receiving Concurrent Non-CDI Antibiotics** Room A

Presenters: Kelli Keats

Extended Duration of Clostridioides difficile Infections (CDI) Treatment in Hematology/Oncology Patients Receiving Concurrent Non-CDI Antibiotics

Kelli Keats, Tia Stitt, Bhaumik Jivan, Daniel Chastain, Amber Clemmons
AUMC1 Augusta University Medical Center/ University of Georgia College of Pharmacy

Vimeo link: https://www.vimeo.com/410670425

Background/Purpose: Risk factors for recurrent CDI include active malignancy due to immunosuppression and/or receipt of concurrent, non-CDI antibiotics. Guideline recommended duration of treatment for CDI is 10-14 days; however, many hematology/oncology patients are at high risk for a recurrence based on immunosuppression and concurrent non-CDI antibiotics at the end of planned CDI treatment duration. This study aims to determine if extended duration of CDI treatment in hematology/oncology patients receiving concurrent non-CDI antibiotics reduces rates of recurrent CDI.

Methodology: This is a multi-site, retrospective chart review of hematology/oncology patients age 18 years or older with an active CDI who received at least one dose of concurrent non-CDI antibiotics during CDI treatment at AU Medical Center or Phoebe Putney Memorial Hospital between September 1st, 2013 and June 30th, 2019. Study groups are patients who received 10-14 days versus >14 days of CDI treatment. Primary outcome is recurrence of CDI. Statistical methodology includes Chi Square analysis and logistical regression to account for differences in group demographics.

Results: 198 patients were analyzed. Patients receiving extended duration of CDI treatment were younger, more likely to have leukemia or transplantation, and more likely to have received fidaxomicin or vancomycin combination therapies. After accounting for differences, no difference was found in CDI recurrence, mortality, or rates of vancomycin-resistant *enterococcus* infections (all $p < 0.05$). Patients receiving extended CDI treatment had longer lengths of stay ($p < 0.0001$).

Conclusions: No differences existed in outcomes; however, further studies need to evaluate benefits of extended CDI treatment for specific populations. Patients had longer lengths of stay when receiving extended treatment, which should deter clinicians from using this dosing strategy without further studies.

Presentation Objective: Explain risks for recurrent CDI and impact of extended duration of CDI treatment in hematology/oncology patients.

Self-Assessment: What factors may influence providers to extend CDI treatment duration?

11:45am – 12:00pm L **137 - Retrospective evaluation of alvimopan for management of post-operative ileus in Veterans undergoing colon resection surgeries** Room E

Presenters: Aparna Krishnamurthy

Retrospective evaluation of alvimopan for management of post-operative ileus in Veterans underoing colon resection surgeries

Aparna Krishnamurthy, Kelly Sugarman, Paul Lucha
SVAM1 Salisbury/W.G. Hefner VA Medical Center

Background: Post-operative ileus is a common complication after abdominal surgeries that decreases gastrointestinal motility and may prolong post-operative length of stay and increase readmission rates. Alvimopan antagonizes effects of opioids on gastrointestinal motility following abdominal surgeries. Previous phase 3 trials showed alvimopan to accelerate recovery time of the gastrointestinal tract, decrease adverse effects, and reduce length of stay. Due to increased cardiovascular risk, a REMS program is established to restrict its use. The purpose was to evaluate efficacy and safety of alvimopan in the Salisbury VACHS Veteran population.

Methodology: This was a quality improvement, restrospective chart review. Veterans underwent colon resection surgeries and received alvimopan based on VA established criteria for use. Primary endpoints were length of stay and 30-day emergency department (ED) and readmission rates. Secondary endpoints included quantity of post-operative opioids, adminsitration times, and adverse effects.

Results: Twenty-five patients were evaluated (average age 76, 88% male). Only 16% were diagnosed with coronary artery disease, but no one had a myocardial infarction within one year of receiving alvimopan. Average length of stay was 4.7 $\pm$ 5.5 days. Adverse effects were minimal. Pre-operative doses were documented incorrectly in 40% of patients. Post-operative doses were administered incorrectly in 65% of patients. Average outpatient opioid use was 82.1 mg, which was similar to findings in the phase 3 trials.

Conclusions: Alvimopan is beneficial in decreasing length of stay and readmission rates compared to phase 3 trials. However, more evaluation is needed to assess efficacy, safety, and effect on cost.

Objective: Describe the effectiveness of alvimopan in decreasing length of hospital stay and hospitalization costs in Veterans who underwent colon resection surgeries.

Self Assessment Question: What pharmacologic interventions are available to enhance recovery after colonic surgeries?

Please view my presentation here: www.youtube.com/watch?v=lcvfuJS-1Js&feature=youtu.be

11:45am – 12:00pm L **139 - Time to Therapeutic Range in Patients Receiving Intravenous Unfractionated Heparin Who Are Transitioning from Direct Oral Factor Xa Inhibitors** Room G

Presenters: Lindsey Lawing

Time to Therapeutic Range in Patients Receiving Intravenous Unfractionated Heparin Who Are Transitioning from Direct Oral Factor Xa Inhibitors

Lindsey Lawing, Jae Yook, Marianne Ray, Susan Smith

PMAR1 Piedmont Athens Regional

Background: Intravenous unfractionated heparin (IV UFH) monitoring is a challenge in patients transitioning from a direct oral factor Xa (DOFXa) inhibitor due to the potential for these medications to falsely elevate anti-Xa assays. This study seeks to compare the time to therapeutic anti-Xa range (TR) in patients transitioning from a DOFXa inhibitor to IV UFH and those not previously anticoagulated with a DOFXa inhibitor and initiated on IV UFH.

Methodology: This single-center, IRB-approved, retrospective study included adult patients at Piedmont Athens Regional from August 1, 2018 to August 31, 2019 who were starting IV UFH during hospitalization. The study group was anticoagulated with either apixaban or rivaroxaban for the treatment of venous thromboembolism (VTE) or atrial fibrillation prior to the initiation of IV UFH, and the control group was not previously anticoagulated with a DOFXa inhibitor. The primary outcome was the time in hours to reach the desired TR. Secondary outcomes included the number of anti-Xa levels drawn to reach TR, incidence of treatment failure, and incidence of major bleeding episodes.

Results: The time to reach TR was approximately 2.5 times longer in the study group than in the control group (median [IQR] time to TR: study 18.5 [14.9-26.9] hours vs control 7.3 [5.9-14.7] hours, $p<0.001$). The study group required significantly more anti-Xa levels to be drawn to reach TR (study 3 [1-4] levels vs control 2 [1-2] levels, $p<0.001$). There was no difference in the incidence of treatment failures ($p=0.972$) or major bleeding events ($p=0.981$).

Conclusions: The time it takes to reach TR is longer in patients transitioning from a DOFXa inhibitor to IV UFH. The prolonged time to reach TR can lead to inappropriate IV UFH dose adjustments, and added lab costs. Further research is needed to detect a difference in risk for a new VTE or stroke.

Objective: Describe the difference in time to therapeutic anti-Xa range among patients receiving IV UFH who transitioned from a DOFXa inhibitor and those not previously anticoagulated.

Self Assessment Question: Do DOFXa inhibitors prolong the amount of time to reach therapeutic anti-Xa range in patients transitioned to IV UFH?

Link to presentation: https://www.youtube.com/watch?v=HeMNqSlW-A8

11:45am – 12:00pm M **141 - Assessment of barriers for utilizing smart infusion pump error reduction software in an oncology setting** Room I

Presenters: Joshua Leggette

Assessing barriers and increasing utilization of smart infusion pump error reduction software in an oncology setting

Joshua Leggette; Ronda Whipple; Rie Avino; Andrea McKeever
jleggette@southuniversity.edu

Presentation Objective: Identify barriers regarding the use of smart infusion pump error reduction software in an oncology setting

Self-Assessment Question: What is a barrier for utilizing smart infusion pump error reduction software in an oncology setting?

Background/Purpose: Oncology intravenous (IV) medications are considered high-alert medications by the Institute of Safe Medication Practices. Therefore, smart IV infusion pumps are used to increase patient safety. In November 2019, the overall oncology clinic utilization adherence was 45.64%.

Methodology: This study was a single-center, clinic-based observational evaluation to assess barriers and increase utilization of smart infusion pump error reduction software. The observational periods were unannounced and occurred twice weekly over a 10-week span. The principle investigator served as the sole observer of clinic activity and noted when the infusion pump software was not utilized and documented accordingly.

Results: Adherence with smart infusion pump error reduction software was 75%, 69%, 100%, and 100% for Clinic 1 and 33%, 54%, 30%, and 69% for Clinic 2 for December 2019, January 2020, February 2020, and March 2020, respectively. The overall oncology adherence for the institution was 53.15%, 53.93%, 46.67%, and 58.33% for the same time period. During the study the total number of drug entities for oncology increased from 1154 to 1211. Identified barriers included drug, concentration range, and/or total volume not present in the library as well as human factors (e.g., nursing time constraints, lack of awareness)

Conclusions: The project was successful at identifying barriers and increasing adherence in the oncology clinic setting. A plan was established for ongoing routine drug library updates and educational efforts using a multi-disciplinary team to achieve the institutional benchmark of 95% adherence.

11:45am – 12:00pm O **134 - Retrospective Review of a Pharmacist Driven Oral Chemotherapy Clinic** Room B

Presenters: Amber Keeton

Retrospective Review of a Pharmacist Driven Oral Chemotherapy Clinic

Keeton A, Patel T, Martin S, and Pippas A

PGY2 Piedmont Columbus Regional Midtown (Ambulatory Care)

Background: The use of oral chemotherapy has expanded as treatment of cancer advances. Oral chemotherapy provides several benefits such as flexibility and ease of administration. Data in certain malignancies shows > 90% adherence is needed for optimal outcomes. This study examined pharmacists impact on adherence for patients on oral chemotherapy.

Methodology: A retrospective review was conducted to assess adherence for patients on oral chemotherapy. The pre-clinic arm (January 1, 2019 to August 1, 2019) included patients on oral chemotherapy serving as the historical comparator. The post-clinic arm (September 1, 2019 to January 3, 2020) were patients enrolled in the pharmacist driven oral chemotherapy clinic. The primary objective was to assess adherence by calculating the Medication Possession Ratio (MPR) for patients before and after implementation of the oral chemotherapy clinic. The MPR score ranges from 0 to 1, 0 = 0% adherence and 1 = 100% adherence. The goal of this study was to achieve >90% adherence post-clinic patients. Secondary objectives included pharmacist interventions and patient cost savings.

Results: There were 46 patients enrolled in the pharmacy oral chemotherapy clinic, 21 of these patients were assessed for adherence. For the primary endpoint, 81% (17/21) of the patients in the pharmacist oral chemotherapy clinic had an MPR $\geq$ 0.9 versus 65% of patients in the historical control, p value 0.1468. A total of 242 interventions were made by pharmacist for 43 patients resulting in 5.6 interventions per patient. The pharmacist provided approximately $36,000 in patient cost savings resulting in $437,100 savings annually.

Conclusions: This study found no statistically significant difference in adherence, however, it did find meaningful clinical interventions and provided patients with cost savings.

Objective: To explain the impact pharmacists can have on oral chemotherapy adherence.

Self Assessment Question: What are the benefits of a pharmacist driven oral chemotherapy clinic?

Presentation Link: https://youtu.be/K7HDenYer-8

11:45am – 12:00pm O **144 - Evaluation of hypertension management in renal cell carcinoma patients on vascular endothelial growth factor (VEGF) inhibitors** Room L

Presenters: Jessica Lewis-Gonzalez

Evaluation of hypertension management in renal cell carcinoma patients on vascular endothelial growth factor (VEGF) inhibitors

Jessica Lewis-Gonzalez, Stacey Lisi, Hannah Dzimitrowicz, Michael Harrison
DUHO2 Duke University Hospital (Oncology)

Background: Evaluate the proportion of patients on anti-VEGF therapy for renal cell carcinoma in which hypertension is managed in concordance with a hypertension treatment guideline

Methodology: Single-center, retrospective, cohort study assessed the hypertension management of adult patients with renal cell carcinoma that had been newly initiated on anti-VEGF inhibitor therapy at Duke Cancer Institute between August 1, 2016 and July 31, 2019. Patients were evaluated and assessed for the prespecified outcomes for three months from initiation of anti-VEGF therapy. Hypertension was defined in concordance with JNC8 Consensus Guidelines, as a blood pressure > 140/90 mmHg in patients under the age of 60 years; and blood pressure > 150/90, in patient aged 60 years or older.

Results: A total of 135 patients were included in the IRB-approved study. Of the patients included, 47.4% developed hypertension during treatment with a VEGF inhibitor. The majority of patients (72%) had hypertension managed in concordance with guidelines, while the remaining 28% were managed in ways that were discordant with guidelines. Only 3% of patients were referred to cardiology or cardio-oncology. At the end of three months, 17% of patients that developed hypertension had not achieved goal blood pressures. During the trial, 8 dose reductions of VEGF inhibitor occurred due to hypertension, and 54 doses of VEGF inhibitor were held/delayed.

Conclusions: Despite guidelines being available to manage hypertension, over one-quarter of patients developing hypertension on VEGF inhibitors in this study were not managed in concordance with guideline recommendations. Appropriate management of blood pressure reduces cardiovascular risk, and could preclude the need for dose reductions and/or held doses of VEGF inhibitors. Maintaining dose-intensity is vital, and can impact overall survival and progression-free survival in these patients. Cardiology and cardio-oncology referrals were underutilized given the percentage of patients not at goal blood pressure, increasing referrals to these services could improve blood pressure management.

Objective: Describe the concordance of hypertension management with guideline recommendations for patients on VEGF inhibitors

Self Assessment Question: What is one possible complication of not appropriately managing VEGF inhibitor-induced hypertension?

Presentation Link: https://youtu.be/8tet-FddhZI

12:00pm – 12:15pm B **153 - Impact of a Community Pharmacy-Based Comprehensive Drug Therapy Management (CDTM) Program Supported by a Medication Synchronization Program** Room I

Presenters: Alison Manjerovic

Impact of a Community Pharmacy-Based Comprehensive Drug Therapy Management (CDTM) Program Supported by a Medication Synchronization Program

Manjerovic A, Prather C, Gamston CE, Peden G, Qian J, Lloyd KB

AUPH1 Auburn University Pharmacy Health Services

Background/Purpose: Medication synchronization programs are used by community pharmacies to improve medication adherence by automatically refilling patient medications. These programs also identify patients with nonadherence to prescription medications and other gaps in care. Community pharmacists can use this technology to identify patients who would benefit from comprehensive drug therapy management (CDTM). This project examined the impact of pharmacist-led CDTM on drug-related problems (DRPs) in patients identified by a medication synchronization program.

Methodology: An integrated pharmacy software was utilized to identify patients with adherence <80% to non-insulin diabetes medications and patients aged 40-75 years taking diabetes medication(s) but not a statin medication in the previous 6 months in a single, closed-door pharmacy. Review of dispensing records identified other potential DRPs and informed the need for CDTM. Eligible patients were seen in the Auburn University Pharmaceutical Care Center (AUPCC). Comprehensive review of patient medications and disease states was conducted by a pharmacist and DRPs were identified, addressed, and resolved. Point-of-care testing and referrals for additional care were completed as indicated. Visit notes were reviewed to determine the impact of pharmacist interventions. Primary outcomes included change from baseline in diabetes medication adherence and percentage of patients with diabetes taking a statin. Secondary outcomes included the number of DRPs identified.

Results: Thirty-four individuals participated. Statin therapy was recommended for 16 patients and accepted in 9 patients. 12 patients had sub-optimal adherence, which improved to >80% in 8 patients within six months. 207 DRPs were identified over 128 total appointments.

Conclusion: Med sync can be utilized to identify patients with gaps in care that can benefit from pharmacist-led CDTM.

Presentation Objective: Assess the use of medication synchronization programs to identify patients needing comprehensive drug therapy management (CDTM).

Self-Assessment: Name one drug-related problem potentially identified by medication synchronization programs and addressed through CDTM.

Presentation: https://youtu.be/IQxCZGB3x00

12:00pm – 12:15pm B **154 - Implementing a Rheumatoid Population Management Tool Within a VA Medical Center** Room J

Presenters: Jonathan Mansfield

Implementing a Rheumatoid Population Management Tool Within a VA Medical Center
Jon Mansfield, Lori Bennett, Bonnie Balderose
JVAA2 Ralph H. Johnson VA Medical Center (Ambulatory Care)
Background: Rheumatological conditions often require chronic treatment with immunomodulating agents, which are associated with significant toxicities and require close monitoring. Active review by a pharmacist ensures that patients receive appropriate monitoring to minimize the risk of toxicity. Currently, at the Ralph H. Johnson VA Medical Center, patient's lab profiles are reviewed regularly by the rheumatology clinical pharmacist and interventions are made as needed. This chart review process is time consuming and was identified as an area needing revision to streamline workflow. The purpose of this study is to examine the impact a population management tool has on number and types of interventions made by a pharmacist in the rheumatology clinic, and to describe its effects on workflow.
Methodology: This was a prospective quality improvement project taking place at the Ralph H. Johnson VA Medical Center from December 2019 to April 2020. Patients eligible for inclusion were those enrolled in the rheumatology clinic and receiving active treatment. A dashboard specific to rheumatology patients receiving these medications was created and implemented as the primary means of medication monitoring. This dashboard flags patients on specified drugs with labs either overdue or out of range. A specialized note template was created to track the interventions made by the pharmacist. The interventions were then compiled and categorized at the end of the study period. The primary outcome of this study was to evaluate the efficacy of utilizing the dashboard in this setting. The secondary outcome was to report the number and types of interventions made by the pharmacist.
Results: In progress
Conclusions: In progress
Objective: At the conclusion of my presentation, the participant will be able to describe lab monitoring parameters for disease modifying anti-rheumatic drugs.
Self Assessment Question: Which medication below requires periodic lipid monitoring?

12:00pm – 12:15pm R **145 - Dopamine versus norepinephrine for cardiogenic shock** Room A

Presenters: Jin Lim

Dopamine versus norepinephrine for cardiogenic shock
Jin Lim, Jeannie Poon, Hannah Brown
Novant Health Presbyterian Medical Center-Charlotte, NC
Presentation Objective: Determine whether dopamine (DA) is associated with increased mortality compared to norepinephrine (NE) in patients with cardiogenic shock (CS)
Background: CS is a low-cardiac output state that can result in tissue hypoperfusion and organ failure. The optimal vasopressor of choice remains unclear in patients with CS requiring hemodynamic support. The Sepsis Occurrence in Acutely Ill Patients (SOAP) II trial evaluated DA versus NE in patients with shock. DA was associated with increased risk of all-cause mortality at 28 days in a subgroup analysis of patients with CS. Despite the findings of the SOAP II trial, the American Heart Association has not taken a clear stance on the optimal vasopressor choice for CS due to confounders associated with subgroup analyses. No studies to date have evaluated the outcomes of the SOAP II trial in the subset of patients with CS.
Methodology: This study is a retrospective chart review that aims to determine whether DA is associated with increased mortality in patients with CS. Patients $\geq$18 years old with CS receiving NE/DA monotherapy for $\geq$30 minutes are included. The primary endpoint is survival to hospital discharge. Secondary endpoints are intensive care unit length of stay (LOS), hospital LOS, DA/NE requirements, time to hemodynamic stability, additional vasopressor use, need for inotropes, incidence of arrhythmia, and presence of Impella, TandemHeart, or left ventricular assist devices.
Results: Rates of hospital survival were 54.7% in the NE group versus 66.2% in the DA group (p=0.11).
Conclusions: There was no statistically significant difference between DA and NE regarding survival to hospital discharge in patients with CS.
Self-Assessment Question: Which vasopressor was associated with increased incidence of arrhythmias during therapy in this study?

12:00pm – 12:15pm R **147 - Evaluation of the Use of Modafinil in Critically Ill Patients** Room C

Presenters: Lindsey Little

Evaluation of the Use of Modafinil in Critically Ill Patients

Lindsey Little, Kayla Nichols, Jolie Gallagher
EUCC2 Emory University Hospital/Mercer University College of Pharmacy (Critical Care)

Background: Modafinil is an FDA approved tablet to promote wakefulness in patients with narcolepsy, obstructive sleep apnea, and shift work sleep disorder. Modafinil may help promote wakefulness and impact delirium in critically ill patients, however there is a paucity of data. Given this limited data, we conducted this study is to evaluate the impact of modafinil on delirium in critically ill patients.

Methodology: Included patients must be at least 18 years old, have an intensive care unit (ICU) stay for at least 48 hours, and be Confusion Assessment Method for the ICU (CAM-ICU) positive at least one time during stay. Exclusion criteria include prior use of modafinil, benzodiazepine, or antipsychotic, lowest Glasgow Coma Score (GCS) >13 within 48 hours before study inclusion, history of neurologic impairment, sleep disorders, or psychiatric conditions, and neuroscience ICU admission. Patients receiving modafinil will be matched to patients without the receipt of modafinil based on admitting ICU, SOFA score, and age.

The primary outcome of this study is duration of delirium. Secondary outcomes include Richmond Agitation-Sedation Scale (RASS) score, ICU and hospital length of stay, mechanical ventilation duration, concurrent use of antipsychotic treatment, escalation of sleep aides, reintubation, and adverse effects. Continuous variables will be compared by using the Student t-test for normally distributed variables and the Mann-Whitney U test for non-normally distributed variables. Categorical variables will be evaluated with Chi-Square or two-tailed Fisher exact test.

Results: In Progress

Conclusions: In Progress

Objective: Describe the impact of delirium in the critically ill population

Self Assessment Question: Critically ill patients are at risk for developing neurocognitive disorders that may impair wakefulness and contribute to development of delirium. Which of the following have been associated with delirium?

a) Increase duration of ventilation
b) Increase hospital length of stay
c) Increase mortality
d) All of the above

Link to presentation: https://youtu.be/QXX8NSef774

12:00pm – 12:15pm R **151 - Impact of ejection fraction on fluid overload in critically ill adults with sepsis or shock.**

Impact of ejection fraction on fluid overload in critically ill adults with sepsis or shock. Room G

Phong T. Ly, Joeanna Chastain, Susan Smith, Jiayuan Zhang, Anthony Hawkins
PPMH1 Phoebe Putney Memorial Hospital/The University of Georgia

Background: Heart failure (HF) is a global pandemic that affects over 26 million people worldwide. Sepsis accounts for one-quarter of heart failure deaths. Patients with chronic heart failure are at higher risk for fluid overload (FO). In critically-ill patients, FO is associated with increased mortality, hospital length of stay, and ventilator use. The Sepsis-3 recommends >30mL/kg crystalloid bolus within 3 hours of diagnosis. The purpose of this study is to evaluate the impact of ejection fraction on fluid overload in critically ill adults with sepsis or shock receiving guideline-directed resuscitation.

Methodology: This single-center, retrospective study of patients with sepsis or septic shock admitted between October 2013 and June 2019. Patients included were > 18 years of age with sepsis or septic shock diagnosis per ICD-10 codes, had an echocardiogram within 12 months or 48 hours of indexed hospitalization, and were admitted to an intensive care unit (ICU). Patients transferred from an outside hospital, diagnosed with acute myocardial infarction, had a left ventricular assist device or care withdrawn <12 hours of sepsis onset were excluded. The primary outcome is the incidence of FO at ICU discharge. Secondary outcomes include incidence of receiving >30 mL/kg within 3 hours, in-hospital all-cause mortality, percent of weight changed at day seven, ICU length of stay (LOS), hospital LOS, mechanical ventilation-free days, and cumulative loop diuretic administered. It is expected that 35% of the normal EF group experience FO at ICU discharge, to detect a 20% absolute difference, 788 patients (394 in each group) are needed to detect a 20% difference in the incidence of FO with an α of 0.05 and power of 80%.

Results: In-progress

Conclusions: In-progress

Objective: At the conclusion of my presentation, the participant will be able to identify the risk factors for fluid overload.

Self Assessment Question: What are the risk factors for fluid overload?

12:00pm – 12:15pm | **148 - Assessing the safety and efficacy of a sofosbuvir-containing regimen for the real-world treatment of chronic hepatitis C in severe renal impairment** Room D

Presenters: Katheryn Long

Assessing the safety and efficacy of a sofosbuvir-containing regimen in the real-world treatment of chronic hepatitis C (HCV) in severe renal impairment

Katheryn Long, Kathryn DeSilva, Emily Cartwright
AVAH1 Atlanta Veterans Affairs Health Care System

Background: The prevalence of HCV infection is higher among patients with chronic kidney disease compared with the general population. The development of direct-acting antivirals (DAA) has led to high cure rates for HCV. Sofosbuvir is a DAA with a number of ideal properties including once daily dosing, high barrier to resistance, minimal adverse effects and few drug-drug interactions. However, sofosbuvir is renally cleared and was not initially approved for patients with a glomerular filtration rate (GFR) less than 30 milliliters per minute. We retrospectively evaluated our real-world experience using a sofosbuvir-containing regimen for HCV treatment in complicated patients with severe renal impairment and limited DAA options.

Methodology: Electronic Veterans Affairs (VA) data sources were used to identify patients with HCV and severe renal impairment (defined as GFR less than 30 milliliter per minute) that received a sofosbuvir-containing DAA regimen between 1 January 2014 and 1 October 2019. The primary outcome examined was virologic cure (defined as undetectable HCV RNA at least 12 weeks after completing therapy), and the secondary outcomes were treatment completion and reported adverse effects. DAA treatment was considered successfully completed if the person attended the week 4 monitoring visit and completed the planned duration of therapy without clinical incident. The following covariates were also examined: patient age, gender, race/ethnicity, baseline HCV viral load, HCV genotype, past treatment experience, HCV treatment regimen and concomitant medications. All data was maintained on a confidential research drive. This analysis was part of an Institutional Review Board approved research protocol.

Results: 23 patients were included in this review. Of the included patients, 16 completed their HCV treatment regimen. Only 10 of these patients had post-treatment week 12 labs drawn, however, all had documented clearance of the virus and were deemed cured. The remaining 6 patients had an undetectable viral load documented at week 4 or later during treatment. The most commonly reported adverse effects were nausea, myalgia, GI upset and headache.

Conclusions: Sofosbuvir appears to be a safe and effective treatment option for patients with HCV and severe renal impairment.

Objective: Identify potential adverse effects associated with sofosbuvir.

Self-Assessment Question: Which of the following is not a common adverse effect associated with sofosbuvir?

12:00pm – 12:15pm | **149 - INTEGRASE STRAND TRANSFER INHIBITORS (INSTI), THE CLANDESTINE ANTINEOPLASTIC CLASS?** Room E

Presenters: Martin Love

Youtube link: https://www.youtube.com/watch?v=zkaRxx96Scs

INTEGRASE STRAND TRANSFER INHIBITORS (INSTI), THE CLANDESTINE ANTINEOPLASTIC CLASS?

Martin Love, Laura Rice

GCVH1 Gulf Coast Veterans Health Care System

Background: Literature has mentioned that Highly Active Antiretroviral Therapy (HAART) that includes a protease inhibitor and two nucleoside analogs has been pivotal in reducing the incidence of HIV-related malignancies such as Non-Hodgkin's lymphoma, central nervous system lymphoma, Kaposi's sarcoma, and other cancer that are prevalent in the HIV-positive population.1 Malignancies in the HIV population has decreased due to HAART and the subsequent increase in CD4 cells, yet malignancies are still higher in the HIV population compared to the general.1,2,5 No recent studies have been conducted to see if different combinations of medications could possibly lead to a lower incidence of malignancies. INSTIs prevents the integration of HIV dsDNA into human dsDNA. The insertion of HIV dsDNA into human dsDNA can be thought to be a precipitating factor for malignancies. This is due to the insertion of HIV dsDNA potentially deactivating tumor suppressor genes, upregulating protooncogenes or disrupting genes needed for CD4 cell communication. In addition, most viruses found in cancer cells are latent, meaning that they have already incorporated into the host's dsDNA. Thus, another possible reason why INSTIs may be beneficial in lowering the incidence of malignancies in the HIV population.4 Therefore, this study was designed to see if there is any correlation of decreased incidence of malignancies in patients on INSTI-based HAART compared to those on non-INSTI-based HAART.

Methodology: This study has been submitted to the Institutional Review Board for approval. The review of electronic medical records will include all Veterans in the Gulf Coast Veterans Health Care System who have previously been on HAART. Veterans will be categorized in groups of neoplasms(cases) and non-neoplasms(controls) and will be assessed retrospectively to see if there is a decreased association of cancer with INSTI-based HAART compared to non-INSTI-based HAART. The following data will be collected: Past HIV medications, HIV viral load, HIV resistance, HIV medication adherence rate, gender, duration of HIV, HIV-genotype, CD4 count, smoking status, ethnicity, obesity, HEPB/C coinfections, renal function, family history of cancer, alcohol use disorder, and age. Inclusion criteria will include active HIV diagnosis and past HAART. Exclusion criteria will exclude Veterans with cancer diagnoses prior to HAART/diagnoses of HIV and Veterans with immunosuppressive disorders (asplenia, organ transplant, chronic immunosuppressive steroid regimens). All data will be recorded without patient identifiers and confidentially will be maintained. Diagnosis of cancer after initiation of HARRT therapy will be recorded. This study will be an observational case-control design. An odds ratio will be calculated to determine the association between INSTI-based HAART and subsequent development of cancer. The ratio of the case to control will be 1:1. INSTI exposure among controls is expected to be 0.7. If the true odds ratio for disease in exposed subjects relative to unexposed subjects is 0.4, this study will need 79 case patients and 79 control patients to meet power of 80%. The Type I error probability associated with the test of the null hypothesis is 0.05. We will use an uncorrected chi-squared statistic to evaluate the null hypothesis.

Results: "In Progress"

Conclusions: "In Progress"

Objective: List 3 HIV-related malignancies.

Self Assessment Question: What potential ways can Integrase Strand Transfer Inhibitors decrease the risk of malignancies in HIV infected individuals?

12:00pm – 12:15pm | **150 - PROCALCITONIN-GUIDED DE-ESCALATION OF ANTIBIOTIC THERAPY IN SEPSIS: ANTIMICROBIAL STEWARDSHIP WITHIN A COMMUNITY HOSPITAL MEDICAL ICU** Room F

Presenters: Arie Lowery

PROCALCITONIN-GUIDED DE-ESCALATION OF ANTIBIOTIC THERAPY IN SEPSIS: ANTIMICROBIAL STEWARDSHIP WITHIN A COMMUNITY HOSPITAL MEDICAL ICU

Arie Lowery, Jana Mills, Brook Jacobs
Emory Decatur Hospital – Decatur, GA

Background/Purpose: Procalcitonin (PCT) is a biomarker that is often used to guide antibiotic decision making due to its' high sensitivity and specificity for bacterial infections. In 2015, Emory Decatur Hospital's Antimicrobial Stewardship Committee implemented a PCT-guided antibiotic de-escalation protocol within the medical ICU. The purpose of this study was to examine clinical outcomes as a result of protocol utilization.

Methodology: A single-center, retrospective cohort analysis was conducted on all adult patients admitted to the medical ICU between September 1st2018 and September 30th2019. Included patients had PCT collected within 24 hours of admission or suspected infection and negative blood cultures ≥ 48 hours. Patients were excluded if they were not eligible for protocol use. Primary endpoints included hospital and ICU length of stay (LOS), length of antibiotic therapy (LOT) and 30-day mortality in order to evaluate 1 year of protocol utility.

Results: One-hundred and seven patients met inclusion criteria. Thirty-nine percent of patients had an initial PCT <0.5. Average reduction in LOT was 6.7 days. Mean LOT prior to de-escalation was 3.1 days and mean total LOT was 5.6 days. Mean ICU LOS was 3.4 days and mean hospital LOS was 7.5 days. Overall 89% of patients had shorter LOT than initially ordered at start of treatment. Patients with a PCT <0.5 at 48-hr had the largest decrease in antibiotic LOT. Three patients had antibiotics restarted within 48-hrs of de-escalation or cessation of antibiotics without escalation of care. One patient was readmitted within 30 days for sepsis. Forty-eight patients did not have mortality within 30 days however we were unable to obtain mortality information for 51 patients.

Conclusions: The use of PCT de-escalation protocols may benefit ASP initiatives by increasing the rate of antibiotic stream-lining and decreasing antibiotic LOT without negatively affecting patient outcomes.

Presentation Objective: Identify benefits and/or limitations to procalcitonin guided early antibiotic de-escalation. Self-Assessment: When is it appropriate to consider early antibiotic de-escalation in patients with negative blood cultures?

Youtube link to presentation:
https://youtu.be/CjHuowrl67c

12:00pm – 12:15pm | **156 - Pharmacist Driven Consult Service for Management of Pneumonia at Discharge in a Community Hospital Setting** Room L

Presenters: Savanna Martin

Pharmacist Driven Consult Service for Management of Pneumonia at Discharge in a Community Hospital Setting

Savanna Martin, Dustin Zeigler, Vipul Shah, Michael Simpson, Hannah Lifsey
Alamance Regional Medical Center – Burlington, NC
Email: savanna.martin@conehealth.com

Presentation Objective: To determine if a pharmacist consult service focused on antimicrobial stewardship for management of patients admitted with community acquired pneumonia (CAP) or diagnosed with hospital-acquired (HAP) or ventilator-associated pneumonia (VAP) while inpatient, can impact the choice and duration of antibiotics at discharge.
Self-Assessment Question: Will a pharmacy-driven consult service in a community hospital impact time to narrowing of broad-spectrum antibiotics, antibiotic choice at discharge, and/or shorten duration of therapy for pneumonia patients?
Purpose: Antimicrobial stewardship is an important method through which pharmacists can impact patient care while reducing hospital costs. This study will evaluate the impact of a pharmacist driven consult service focused on antimicrobial stewardship at discharge for patients with CAP, HAP, or VAP admitted at Cone Health - Alamance Regional Medical Center (ARMC). Specifically, the pharmacist will be consulted to choose the appropriate antibiotic and duration for those in whom CAP/HAP/VAP is confirmed at discharge.
Methods: This study has two intervention groups. The control group, of the study includes patients admitted to ARMC prior to a pharmacy consult service for CAP/HAP/VAP management at discharge. The data collection period for the first arm ran from October 1, 2018 through February 28, 2019. The intervention group evaluates patients admitted to ARMC after the pharmacy consult for antibiotic management at discharge and ran from November 15, 2019 through April 15, 2020. A chart review has been conducted for any qualifying patient to gather baseline demographic data.
Results: A statistically significant outcome of this study was total antibiotic duration reduction ($p = 0.003$) for pneumonia patients at discharge.
Conclusions: Pharmacists can play a role by performing allergy reconciliation to ensure appropriate antibiotic choice, by evaluating duration through inpatient to outpatient transition, and by recommending more appropriate antibiotic options for patients.

12:00pm – 12:15pm D **155 - Impact of a sedation scale on sedation management in a pediatric intensive care unit**

Presenters: Kristin Markiewicz Room K

Impact of a sedation scale on sedation management in a pediatric intensive care unit

Kristin Markiewicz; Mindy Parman

NHPM1 Novant Health Presbyterian Medical Center

Background: Sedation management in pediatric patients within the intensive care unit can pose a challenge due to the wide age range and differing developmental stages among the patient population. Prior to this study, the pediatric intensive care unit (PICU) at Novant Health Presbyterian Medical Center (NHPMC) did not utilize a pediatric-validated sedation scale for objective sedation monitoring.

Methodology: This study was a retrospective review evaluating the impact of a sedation scale on sedation management in the NHPMC PICU. The COMFORT-B Scale was implemented as an objective assessment tool for optimal sedation control. Cohort 1 was pre-implementation of the sedation scale and used as a comparator against Cohort 2. Cohort 2 was post-implementation of the sedation scale. The primary endpoints evaluated were time to achieve optimal sedation and total duration of sedation. Secondary endpoints evaluated were duration of mechanical ventilation, number of doses or titrations of sedatives to achieve goal sedation, and length of stay.

Results: From September 2017 to September 2019, 35 patients were enrolled into Cohort 1 and from October 2019 to March 2020, 6 patients were enrolled into Cohort 2. Time to achieve optimal sedation did not differ significantly between groups, with a mean of 6.8 hours in Cohort 1 and 8.4 hours in Cohort 2 (p=0.292). Additionally, total time optimally sedated did not differ significantly between groups, with a mean of 3.3 days in Cohort 1 and 2.7 days in Cohort 2 (p=0.239).

Conclusions: The COMFORT-B sedation scale provided similar sedation management compared to the previous protocol. The use of a validated sedation scale may improve sedation practices going forward.

Objective: Describe the impact of utilizing a validated sedation scale for sedation management in critically ill pediatric patients

Self-Assessment Question: Which of the following are adverse consequences of inadequate sedation management?

12:00pm – 12:15pm T **146 - Catching our breath: impact of pharmacy-led Intensive Patient edUcation and Follow-up (I-PUF) program in patients with COPD** Room B

Presenters: Jenny Lin

Catching our breath: impact of pharmacy-led Intensive Patient edUcation and Follow-up (I-PUF) program in patients with COPD

Jenny Lin, Pamela M Dickerson, Maria M Thurston, Vivian Liao, Teresa Pounds
WSAM1 WellStar Atlanta Medical Center

Background: An estimated 24 million Americans have COPD and 6.9% of those are Georgians. Hospitalization for COPD is associated with an annual treatment cost of $9,800 per patient and a 22.6% 30-readmission risk. Patients with COPD have an increased use of health care resources – hospitalizations, emergency room visits, office visits, and prescription medications. Reducing costs and healthcare utilization while improving quality of care continue to be challenges for many health systems.

The objective of the I-PUF program is to assess 30-day readmission in patients with COPD.
Methodology: This was a single-center, IRB approved, prospective, randomized, controlled study. Patients were included if they had an ICD-10 diagnosis code for COPD, were at least 18 years of age, and were able to answer questionnaires in English. A COPD-specific report was processed daily between September 1, 2019 and March 1, 2020, and subjects were randomized 1:1 into control and intervention groups. The control group received standard of care, while the intervention group received standard of care plus the I-PUF program. The program included medication counseling and inhaler technique overview at discharge, assessment of medication adherence and smoking cessation, assessment of social determinants and patient satisfaction, and follow-up telephone calls on days 14 and 30 post-discharge.

Data collection included: demographics, number of medications, adherence, social barriers, patient-reported symptoms, and 30-day readmission. Data from the intervention and control groups were analyzed using chi-square test and the logistic regression analysis.

Results: 30 day readmission (n, %) - Control group (7, 14.3%) versus Intervention group (4, 8.2%) with p-value of 0.481.

Conclusions: The I-PUF program has decreased the number of readmission; and therefore, may establish a role for pharmacists in transitions of care.

Objective: To evaluate the impact of a pharmacy-led Intensive Patient edUcation and Follow-up (I-PUF) program on hospital readmissions in patients with chronic obstructive pulmonary disease (COPD). At the conclusion of my presentation, the participant will be able to identify methods of implementing pharmacy-led initiatives for patients with COPD.

Self Assessment Question: What resources can assist with implementing the I-PUF service?

12:00pm – 12:15pm 1 **152 - Early versus Late Cytomegalovirus Prophylaxis After Liver Transplant** Room H

Presenters: Mackenzie Magid

Early versus Late Cytomegalovirus Prophylaxis After Liver Transplant

M Magid, J Byrns, J Gommer, Z Yang, M Harris

DUHT2 Duke University Hospital (Transplant)

Background: Cytomegalovirus (CMV) is the most common opportunistic infection after transplant and is associated with varying degrees of morbidity/mortality. At Duke, liver transplant recipients who are CMV-positive receive prophylactic valganciclovir for 3-months, regardless of the donor's status (D+ or D-/R+), and patients who are high-risk (D+/R-) receive 6-months. The purpose of this study was to compare the incidence and timing of CMV infection in liver transplant recipients who received early versus delayed prophylaxis.

Methodology: Retrospective, single-center study of adult liver recipients transplanted between 2/1/17-2/28/19 who were high (D+/R-) or intermediate-risk (R+). Early prophylaxis was defined as initiation prior to post-op day 7, and delayed as initiation on post-op day 7 or after. The primary endpoint was the incidence of CMV DNAemia between groups. Secondary endpoints included peak quantifiable viral load, time to detection, and incidence of tissue invasive disease. Multivariable logistic regression was utilized to explore if timing of prophylaxis impacted CMV DNAemia.

Results: 119 patients (n = 60 in early and n = 59 in delayed) were included and baseline demographics were similar except for gender. Twenty (33.3%) patients in the early group and 17 (28.8%) in the delayed group developed CMV DNAemia within 9-months of transplant (p = 0.6). The median time from transplant to the first positive PCR was 217 days and 197 days in the early and delayed groups, respectively (p = 0.4).

Conclusions: No difference was seen in the incidence of CMV DNAemia within 9-months of liver transplant between patients started on CMV prophylaxis before or after post-op day seven. Delaying prophylaxis may limit side effects during the early post-op period and be cost-saving.

Objective: Describe the impact on the incidence of CMV DNAemia in early versus delayed prophylaxis in liver transplant recipients.

Self Assessment Question: What is the greatest risk factor associated with CMV DNAemia in the liver transplant population?

Click this link to view the presentation: https://1drv.ms/v/s!AoiPeXxPc6dPgcJ3DIFjjhos_WYqVg?e=PD4IX6

12:15pm – 12:30pm B **158 - Comparison of Inappropriate Azithromycin Prescriptions in Nine Primary Care Clinics Post-Implementation of a Clinical Decision Support Panel** Room B

Presenters: Alexandria May

Comparison of Inappropriate Azithromycin Prescriptions in Nine Primary Care Clinics Post-Implementation of a Clinical Decision Support Panel

Alexandria May, Allison Hester, Kristi Quairoli Jordan Wong Sheetal Kandiah
GMHA2 Grady Memorial Hospital (Ambulatory Care)

Background: To evaluate the effect of a clinical decision support (CDS) panel in the electronic medical record (EMR) on the percentage of inappropriate outpatient azithromycin prescribing.

Methodology: This study was a retrospective chart review of adult patients prescribed azithromycin in nine primary care clinics at Grady Health System (GHS) post-CDS panel implementation between February 1, 2019 and April 30, 2019. Previously collected pre-CDS panel data was between November 1, 2016 and April 30, 2017. Key exclusion criteria were prescriptions for treatment of a sexually transmitted infection or prophylaxis against Mycobacterium avium complex. The primary outcome was the change in percentage of inappropriate azithromycin prescribing as a composite outcome after CDS panel implementation. Secondary outcomes included analysis of inappropriateness of prescriptions based on individual components of the composite outcome including inappropriate indication, unnecessary prescription, excessive or insufficient treatment duration, and/or inappropriate dose.

Results: Of the 560 azithromycin prescriptions identified post-intervention, 263 prescriptions were included in the analysis. Overall, there was a decrease in inappropriate azithromycin prescriptions by 12.6% post-CDS implementation (81.4% vs. 68.8%; P = .001). The reduction in the composite outcome was primarily driven by a lower percentage of unnecessary prescriptions (67.8% vs. 55.9%; P = .004) and prescriptions with inappropriate indications (69.7% vs. 61.2%; P = .035) in the post-intervention group. Within the post-intervention period, 78.1%, 45.0%, and 37.0% of the azithromycin prescriptions were inappropriate by attending physicians, resident physicians, and advance practice providers, respectively. Azithromycin prescriptions, in the post-intervention period, were 76% inappropriate from non-academic clinics and 46% from academic clinics.

Conclusions: Implementation of an EMR-based CDS panel lead to a 12.6% reduction in the percentage of inappropriate outpatient azithromycin prescriptions.

Objective: Review the change in inappropriate azithromycin prescribing after implementation of an EMR-based CDS panel

Self Assessment Question: What are some ways in which EMR-based stewardship interventions influence antibiotic prescribing?

12:15pm – 12:30pm B **166 - EVALUATION OF THE FACTORS ASSOCIATED WITH THE MISUSE OF ANTIBIOTICS IN THE OUTPATIENT TREATMENT OF PATIENTS WITH ACUTE BACTERIAL SINUSITIS** Room J

Presenters: Mackenzi Meier

EVALUATION OF THE FACTORS ASSOCIATED WITH THE MISUSE OF ANTIBIOTICS IN THE OUTPATIENT TREATMENT OF PATIENTS WITH ACUTE BACTERIAL SINUSITIS

Mackenzi Meier, Allison Presnell, Rachel Musgrove, Joey Crosby
SJCH1 St. Joseph's/Candler Health System

Background: To evaluate the appropriateness of antibiotic therapy in patients treated for acute sinusitis in the outpatient setting.

Methodology: A computer-generated list identified adult patients seen at the St. Joseph’s/Candler Medical Group outpatient clinics diagnosed with an ICD-10 code indicating acute sinusitis. Patients were excluded if they had a concurrent diagnosis of another upper respiratory tract infection or if they had been diagnosed with acute sinusitis within the previous month. It was then determined if patients were treated appropriately for acute sinusitis and if any patient and/or provider specific factors were associated with the misuse of antibiotics.

Results: Of the 226 patients evaluated for the treatment of acute bacterial sinusitis, 178 patients (79%) received therapy considered to be inappropriate based on current treatment guidelines. The majority of those patients either received an antibiotic when not indicated (141 patients) and/or were prescribed the incorrect antibiotic (129 patients). The most common antibiotic prescribed was amoxicillin +/- clavulanate (36%) followed by azithromycin (24%) and then 3rd generation cephalosporins (12%). A multivariate analysis was performed to determine which factors led to the misuse of antibiotics. Those treated inappropriately were more likely to report seasonal allergies (p=0.008). Other patient characteristics (sex, smoking status, asthma, COPD, reported penicillin allergy) and provider characteristics (provider type and years in practice) were not predictive of inappropriate treatment.

Conclusions: Despite current treatment guidelines, patients are frequently treated inappropriately for sinusitis. Due to the growing threat of antibiotic resistance attributable in part to the misuse of antibiotics, this study highlights the need for expansion of stewardship programs to the outpatient setting.

Objective: Identify the current rate to which antibiotics are inappropriately prescribed.

Self Assessment Question: What is the most common inappropriately prescribed antibiotic for acute sinusitis?

LINK TO PRESENTATION

https://youtu.be/bzaE_eVcUXM

12:15pm – 12:30pm Y **168 - Community pharmacy dispensing patterns of naloxone after implementation of a clinical intervention program** Room L

Presenters: Diamond Melendez

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

Diamond Melendez, Wendy Gabriel, Holly Lowe, Don Branam, Laura Schalliol
SCSP1 South College School of Pharmacy

Background: 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 Centers for Disease Control and Prevention (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. The objective 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.

Methodology: When a 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 to 2019 calendar year.

Results: In progress.

Conclusions: In progress.

Objective: Describe the impact of a clinical intervention program on naloxone dispensing rates in community pharmacies.

Self Assessment Question: How can community pharmacists increase public access to naloxone?

12:15pm – 12:30pm R **157 - Comparison of weight-based vs. nonweight-based continuous infusion fentanyl dosing regimens in mechanically ventilated adults** Room A

Presenters: Sahar Matloub

Background: Continuous infusion fentanyl is often used first line for analgosedation in many ICU patients due to a quick onset of action and ability to be easily titrated. Initial dosing, as well as subsequent titrations, has been traditionally based on actual body weight. Previous studies have demonstrated weight-based dosing regimens often over estimates the analgesia and sedative requirements for a patient, especially in the overweight and obese patient populations.

The purpose of this study is to compare total amount of fentanyl administered to patients between non-weight based and weight-based dosing strategies and to evaluate patient safety and efficacy outcomes.

Methods: A single-center center, retrospective, chart review study was conducted on patients admitted to the ICU before and after an institution protocol change was made from weight-based dosing to non-weight based dosing, between October 2018 to February 2019 and from October 2019 to February 2020. Patients were excluded if they were less than 18 years of age, initially sedated using another agent, received fentanyl for less than 24 hours, required intubation due to cardiac arrest or severe neurological injury, and patients initiated on comfort care protocol. The primary endpoint was the difference in average daily, hourly max, and hourly median fentanyl doses. The secondary endpoints included amount of daily adjunctive opioids, cumulative daily opioid administration, ICU and hospital length of stay, time requiring mechanical ventilation, critical care assessments (CPOT/RASS/CAM-ICU), self-extubating rates, concurrent use of other continuous infusion sedatives, required tracheostomy, development of an ileus, or death during hospitalization.

Results: This IRB approved study included a total of 60 patients (n=30 weight based, n=30 non-weight based dosing regimens). For the primary outcome, there was a significant reduction in the average daily (5018 mcg weight-based, vs. 3367 mcg non-weight based, p=0.002) and hourly max (920 mcg weight based, vs. 525 mcg, non-weight based, p=<0.001) of fentanyl administered with the continuous infusion. The secondary endpoints included, a significantly higher number of patients on the non-weight based protocol concurrently receiving dexmedetomidine (36.7%, weight based, vs. 63.3% non-weight based, p=0.039) and adjunctive daily opioids (60 mcg, weight based, vs. 160 mcg non-weight based, p=0.033). However, the overall daily opioids administered was still significantly less with the non-weight based dosing protocol (5134 mcg weight-based, vs. 3535 mcg, weight based, p=0.019).

Conclusion: Mechanically ventilated adults in the ICU received significantly less daily fentanyl (via continuous infusion) and overall daily opioids on the non-weight based regimen as compared to the weight based dosing regimen.

Objective: Discuss dosing strategies for continuous infusion fentanyl in mechanically ventilated patients in the ICU.

Self Assessment Question: What dosing regimen of continuous infusion fentanyl provides the least amount of daily fentanyl for a patient?

To view my presentation please use the link below:
https://vimeo.com/410811234

12:15pm – 12:30pm R **161 - EVALUATION OF THE EFFECT OF HYDROCORTISONE AND FLUDROCORTISONE COMBINATION THERAPY COMPARED TO HYDROCORTISONE MONOTHERAPY IN SEPTIC SHOCK** Room E

Presenters: Stephen McCall

EVALUATION OF THE EFFECT OF HYDROCORTISONE AND FLUDROCORTISONE COMBINATION THERAPY COMPARED TO HYDROCORTISONE MONOTHERAPY IN SEPTIC SHOCK

Stephen McCall, Joseph Crosby, Sabrina Croft
SJCH1 St. Joseph's/Candler Health System

Background: Determine potential hemodynamic benefit based on time spent on vasopressor therapy with hydrocortisone and fludrocortisone combination therapy compared to hydrocortisone monotherapy.

Methodology: Patients 18 years or older were included in this retrospective, observational, chart review based on admission to one of the intensive care units at St. Joseph's or Candler Hospital and diagnosed with septic shock between January 1, 2016 and December 31, 2019. The health system's software and a computer MedMined™ services were used to identify patients with this diagnosis treated with corticosteroids. Patients included also had additional information gathered including comorbid disease states, admission date and diagnosis, and source of infection.

Results: 65 total patients were included in the IRB-approved study; 25 were in the combination therapy group, and 40 were in the monotherapy group. The mean time spent on vasopressors was 98.4 hours and 128.0 hours, respectively. Mean time spent on mechanical ventilation was 139 hours in the combination group compared to 196.5 hours. 30-day mortality was 44% (11/25) in the combination group and 25% (10/40) in the monotherapy group. Adverse events recorded related to steroids included new infection (12% combination, 5% monotherapy), hyperglycemia (44%, 68%), hypokalemia (56%, 55%), and hypernatremia (48%, 40%).

Conclusions: Our results indicate that combination therapy results in numerically less time spent on vasopressor therapy for hemodynamic support. Time spent on mechanical ventilation, ICU length of stay, total hospital length of stay, and 30-day mortality were not statistically different between combination therapy and monotherapy. Incidence of adverse events was relatively similar. Further analysis limited by power.

Objective: Describe and compare results of our retrospective review to current literature and what implications may be extended to patient care.

Self Assessment Question: What is one potential benefit to corticosteroid therapy in patients with septic shock and continued hemodynamic instability?

LINK TO PRESENTATION

https://www.youtube.com/watch?v=716O5m0Q64g&feature=youtu.be

12:15pm – 12:30pm R **163 - Evaluating the use of procalcitonin-guided antibiotic therapy for septic intensive care unit patients in a community hospital** Room G

Presenters: Bradley McCoul

Evaluating the use of procalcitonin-guided antibiotic therapy for septic intensive care unit patients in a community hospital

Bradley McCoul, Sonia Thomas
PCOM1 Philadelphia College of Osteopathic Medicine School of Pharmacy/Wellstar North Fulton Hospital

Background: Antibiotic resistance is a worldwide problem that the CDC has designated as a national priority. Unnecessary use and misuse of antibiotics are contributing factors towards this growing issue. It has been estimated that approximately 20 – 50% of antibiotics prescribed in the acute care hospital setting are either inappropriate or unnecessary. Discontinuation of unnecessary antibiotics is one method to address the problem. Procalcitonin has been shown to be beneficial in guiding the discontinuation of antibiotic therapy in septic patients in the intensive care unit. Meta-analyses and systematic reviews have evaluated that procalcitonin utilization has successfully decreased the duration of antibiotic therapy while showing no significant difference between 28-day and 60-day mortality.
Despite the benefits of implementing a procalcitonin-guided antibiotic protocol, there has been real-world data to suggest that there is a low utilization of procalcitonin protocols, which has been attributed to a potential lack of trust in safety and efficacy. The goal of this study is to assess the utilization of procalcitonin as a biomarker to guide antibiotic therapy in the ICU setting in a community hospital.

Methodology: This is a retrospective, cross-sectional, electronic medical chart review. Which included patients who have had procalcitonin levels drawn from October 1, 2018 through October 31, 2019 while in the ICU with a diagnosis of sepsis will be pulled and an assessment will be done by looking up each medical record number (MRN) to see if procalcitonin levels were trended and antibiotic therapy was de-escalated or escalated accordingly per the procalcitonin algorithm.

Results: The 75 patients included in this study were differentiated into those who had completely utilized the algorithm with appropriately trended procalcitonin levels to escalate or de-escalate antibiotic therapy and those that did not. In the algorithm utilization group, there was 1 (1.3%) patient in total that had their antibiotic therapy escalated based off of procalcitonin levels. Alternatively, of the 74 (98.7%) patients that did not utilize the algorithm, 13 (17.3%) patients had trended procalcitonin levels per the algorithm, but no escalation or de-escalation had occurred in relation to these levels. In the 13 patients that had trended the PCT per the algorithm, none had utilized the PCT levels to modify the antibiotic regimen.

Conclusions: The utilization of the procalcitonin algorithm at our institution is low as only 1 patient had utilized the algorithm as intended. Although some components of the algorithm were used individually, they were rarely all used in conjunction to guide antibiotic therapy. As a result, we were unable to asses an actual impact that the PCT algorithm may have had on duration of therapy or treatment failure. Further prospective research promoting the utilization of the procalcitonin algorithm is necessary to determine the impact procalcitonin-guided therapy has on duration of therapy and treatment failure.

Objective: Describe the likelihood that a procalcitonin algorithm will be utilized appropriately in septic patients in the ICU in a community hospital.
Self Assessment Question: How are procalcitonin levels used to streamline antibiotic therapy?

12:15pm – 12:30pm R **165 - Implementation of a pharmacist led intervention to assess appropriateness of chemical stress ulcer prophylaxis** Room I

Presenters: Symone McWilliams

Implementation of a pharmacist led intervention to assess appropriateness of chemical stress ulcer prophylaxis
Ariel S. McWilliams, Brittany Nesmith, Rachel Langenderfer
BSSF1 Bon Secours St. Francis Downtown
Background: Stress ulcer prophylaxis (SUP) is often indicated in certain patient populations; however, patients are often continued on these medications inappropriately. The purpose of this study is to establish and implement a pharmacist led SUP review for all intensive care patients and assess the appropriateness of therapy in patient days.
Methodology: This retrospective study will utilize the electronic medical record to review randomly selected adult patients with a SUP order initiated in an intensive care unit. The pre-intervention review was completed from March 1, 2019 to September 1, 2019 while data is currently being collected for the post-intervention. Physicians were contacted to discuss the intervention and advised to discontinue if necessary. A pre and post intervention chart review was performed to assess inappropriate patient days, cost savings, and discharge medications. The results are being evaluated to determine what impact pharmacist interventions made on patient care through assessing medication avoidance, potential cost savings, and unnecessary medications at discharge.
Results: Patients had an average of 6.3 days of stress ulcer prophylaxis while hospitalized. It was noted that there was a mean of 3.5 and a median of 2 inappropriate days of SUP therapy. There was a total of 443 SUP days while 224 of those days were inappropriate. Forty-two of the 65 patients reviewed had indications to initiate SUP with prolonged mechanical ventilation being the most common. These patients had a mean of 5.1 inappropriate days once a SUP indication was removed. At discharge, 63% of patients continued to have SUP.
Conclusions: In progress
Objective: Identify the impact pharmacist interventions can make on use of stress ulcer prophylaxis by assessing appropriateness of therapy in patient days.
Self Assessment Question: What education can pharmacists provide healthcare providers to help avoid unnecessary stress ulcer prophylaxis?

12:15pm – 12:30pm I **164 - COMPARISON OF TRADITIONAL INITIAL VANCOMYCIN DOSING VERSUS UTILIZING AN ELECTRONIC AUC/MIC VANCOMYCIN DOSING PROGRAM** Room H

Presenters: Kerri McGrady

COMPARISON OF TRADITIONAL INITIAL VANCOMYCIN DOSING VERSUS UTILIZING AN ELECTRONIC AUC/MIC VANCOMYCIN DOSING PROGRAM
Kerri McGrady, Makenzie Benton, Serina Tart, Dana Jackson, Riley Bowers
CFVM Cape Fear Valley Medical Center
Background: Area under the curve to minimum inhibitory concentration (AUC/MIC) has been recommended by the 2019 updated vancomycin guidelines for dosing vancomycin. Trough based dosing is not a sufficient surrogate as AUC/MIC targets of 400-600 mg*hr/L can usually be reached without achieving troughs of 15-20 mg/L. Compare the differences mean initial 24-hour vancomycin exposure in traditional trough-based dosing versus dosing recommended by an AUC/MIC dosing program.
Methodology: Adult patients hospitalized at Cape Fear Valley Medical Center between May 1, 2019 and December 31, 2019 who received at least 24 hours of IV vancomycin treatment were retrospectively reviewed in this single-center cohort study. The primary endpoint was difference in mean 24-hour vancomycin exposures in milligrams (mg) received between patients' traditional trough-based dosing received and recommended dose via AUC/MIC dosing program. Rates of vancomycin induced adverse events, including acute kidney injury (AKI), elevated steady-state trough concentrations, and Red Man's syndrome were also compared between patients who received doses consistent with the AUC/MIC dosing recommendation versus those who did not.
Results: 264 patients were included in this study. There was a significantly lower 24-hour vancomycin exposure between the recommended AUC/MIC dose versus the dose received (2380.7 ± 966.6 mg vs 2649.6 ± 831.8 mg, [102.872-154.065] p=0.0007). There were no differences found in secondary safety endpoints.
Conclusions: Utilizing an electronic AUC/MIC vancomycin dosing calculator would result in less overall vancomycin exposure. Patients who received initial doses consistent with this recommendation did not experience less adverse events, however this study was not adequately powered for these endpoints.
Objective: Describe the differences in initial vancomycin exposures in traditional trough-based dosing and AUC/MIC-based dosing.
Self Assessment Question: What side-effect of vancomycin may be avoided by utilizing AUC/MIC-based dosing?
Youtube link: https://www.youtube.com/watch?v=idv6lbAl7Qc&feature=youtu.be

12:15pm – 12:30pm | **167 - ORAL BETA-LACTAMS VERSUS QUINOLONES FOR ENTERIC GRAM-NEGATIVE BACTEREMIA** Room K

Presenters: Anteneh Mekonnen

ORAL BETA-LACTAMS VERSUS QUINOLONES FOR ENTERIC GRAM-NEGATIVE BACTEREMIA

Anteneh Mekonnen, Jessica Michal, Stephanie Milliken

MRMC1 McLeod Regional Medical Center

Background: Evaluate whether use of oral beta-lactams versus quinolones impacts readmission rates in patients with enteric Gram-negative bloodstream infections (BSIs).

Methodology: This retrospective cohort study evaluated patients at least 18 years of age admitted to six community hospitals in a single health system with at least one blood culture positive for Escherichia coli, Klebsiella pneumoniae, Klebsiella oxytoca, Proteus mirabilis, Proteus vulgaris, or Proteus penneri and who received at least three days of oral quinolone or beta-lactam antibiotics . The primary endpoint is 90-day all-cause readmission. Secondary endpoints include 30-day all-cause mortality, 30-day all-cause readmission, 30-day recurrence of bacteremia, total duration of antimicrobials, and total duration of antimicrobials at discharge. Assuming a 40% 90-day readmission rate in the quinolone group, a final sample size of 164 patients was needed to detect a 50% difference in readmission rates with 80% power and alpha of 0.05.

Results: Eighty-two patients were included in each arm of the study. Escherichia coli was responsible for 78% of bacteremias. Most patients were bacteremic from urinary tract infections (77%). The primary endpoint of 90-day readmission was met by 21% and 22% of patients in the quinolone and beta-lactam groups, respectively (p=1.00). Of the prespecified secondary endpoints, only dose optimization was statistically significantly different between groups with quinolone dosing optimized less frequently than in the beta-lactam group (48% vs 62%, p=0.02).

Conclusions: Among patients treated with oral antibiotics for Gram-negative BSIs of primarily urinary tract origin, there was no difference in 90-day readmission rates when using quinolone or beta-lactam antibiotics.

Objective: Explain whether or not oral beta-lactams may be used in place of oral quinolones to treat Gram-negative bacteremia.

Self Assessment Question: What are some limitations to using oral quinolones to treat Gram-negative bacteremias?

https://www.youtube.com/watch?v=YoC1E2q957w&t=77s

12:15pm – 12:30pm N **159 - RELATIONSHIP BETWEEN INFARCT CORE AND INTRACRANIAL HEMORRHAGE AFTER INTERVENTIONAL TREATMENT IN ISCHEMIC STROKE PATIENTS** Room C

Presenters: Shawna McAdams

RELATIONSHIP BETWEEN INFARCT CORE AND INTRACRANIAL HEMORRHAGE AFTER INTERVENTIONAL TREATMENT IN ISCHEMIC STROKE PATIENTS

Shawna McAdams, Marshall Hall, Jason Thurman, Deanna Pouliot

TSMC1 TriStar Skyline Medical Center

Background: Tissue plasminogen activator (tPA) is a potentially life-saving medication and current standard of therapy in select ischemic stroke patients. However, literature has shown higher rates of intracranial hemorrhage (ICH) in ischemic stroke patients that received tPA compared to placebo. Computed tomography (CT) perfusion scanning is utilized for the evaluation of stroke and indicates the size of infarct core, or non-viable tissue, and size of ischemic penumbra, or viable tissue that encompasses the core. Literature has assessed the relationship between size of infarct core with 90-day outcomes, but paucity exists evaluating the correlation between the size of core and ICH rates.

Methodology: A retrospective, cohort study is being conducted on eligible patients greater than or equal to 18 years of age who experienced an ischemic stroke, underwent CT perfusion imaging and received tPA. The electronic health record system and institution-specific stroke registry will be utilized to identify patients meeting criteria for eligibility between the dates of April 1, 2017 and September 30, 2019. Patients are divided into five groups based on infarct core size on initial CT perfusion scan: 0 mL, 1-25 mL, 26-50 mL, 51-75 mL, >75 mL. The primary endpoint is ICH rates as they relate to infarct core size and tPA administration. Secondary endpoints will include ICH rates as they relate to additional potential risk factors including age, antiplatelet therapy prior to admission, and hypertension requiring treatment prior to tPA administration.

Results: In progress

Conclusions: In progress

Objective: Evaluate if there is a correlation between the size of infarct core and ICH rates in ischemic stroke patients that received tPA.

Self Assessment Question: Does a larger infarct core size increase the risk of ICH following administration of tPA in ischemic stroke patients?

YouTube link to oral presentation: https://www.youtube.com/watch?v=wltARGcklSI&feature=youtu.be

12:15pm – 12:30pm O **160 - The impact of body mass index (BMI) on the safety and outcomes of small molecule inhibitors (SMI)** Room D

Presenters: Colleen McCabe

The impact of body mass index (BMI) on the safety and outcomes of small molecule inhibitors (SMI)
C McCabe, A Draper, T Beardslee, S Caulfield, U Patel, W Shaib, R Pillai
EUHO2 Emory University Hospital Midtown (Oncology)
Background: A number of studies have demonstrated that overweight and early obese states are associated with improved survival in renal and melanoma cancer patients.
Methodology: A retrospective chart review was conducted to compare outcomes between patients with BMIs ≥ 25 and < 25 who received treatment at Winship between 1/2010-8/2019. The primary objective was to determine the PFS, OS, and ADR rates of patients with BMI ≥ 25 treated with SMIs compared to patients with BMIs < 25. PFS and OS rates were estimated with the Kaplan-Meier method and compared between the groups using the log-rank test. The incidence of adverse events was estimated as frequency and percentage and logistic regression was used to estimate the impact of BMI on adverse effects.
Results: For GI cancers, 269 patients were included in analysis for PFS, 61 for OS and 281 for ADR rate analysis. For thoracic cancers, 198 patients were included in PFS analysis, 20 in OS and 186 in ADR analysis. There was no significant difference seen in PFS and OS between the BMI < 25 and BMI ≥ 25 groups (HR 1.10 (0.88-1.37), p = 0.394, HR 0.77 (0.48-1.21), p = 0.254, respectively). A significant difference was demonstrated in the rates of adverse reactions between the two groups (OR 0.36 (0.23-0.54), p< 0.001) with BMI < 25 having a lower rate of ADRs.
Conclusions: Based on the multiple regression analysis, patients with a BMI ≥ 25 do not have improved outcomes over those with a BMI < 25 when taking SMIs for their GI and thoracic malignancies. Patients with BMI <25 experienced less drug toxicity that required dose reduction, discontinuation, or treatment delays for GI and thoracic cancers.
Objective: At the conclusion of my presentation, the participant will be able to explain the phenomenon called the obesity paradox in oncology.
Self Assessment Question: What is the obesity paradox? A medical hypothesis which holds that obesity may, counterintuitively, be protective and associated with greater survival and toxicity tolerance.

https://www.youtube.com/watch?v=Yd2IoIL1lQw&feature=youtu.be

12:15pm – 12:30pm D **162 - EFFECT OF TIMING OF FIRST DOSE OF CAFFEINE ON BRONCHOPULMONARY DYSPLASIA AND MORTALITY IN PREMATURE NEONATES** Room F

Presenters: Kia McCormick

Effect of Timing of First Dose of Caffeine on Bronchopulmonary Dysplasia and Mortality in Premature Neonates
Kia McCormick, Laura Hagan, Corinne Murphy
PCRM1 Piedmont Columbus Regional Midtown
Background: Caffeine is one of the most commonly prescribed medications in the neonatal intensive care unit (NICU) and has been shown to have beneficial effects on many neonatal outcomes. There is growing evidence that the timing of caffeine initiation plays a major role in reducing the incidence of bronchopulmonary dysplasia (BPD) and mortality; however, the optimal time of administration is unknown. The purpose of this study is to determine if early caffeine initiation within the first two hours of life has an effect on the incidence of BPD or mortality in neonates compared to administration after the first two hours of life.
Methodology: An IRB approved retrospective chart review was conducted from July 1, 2016 to June 30, 2019 of neonates who received caffeine at one of the seven level III NICUs located within the Piedmont Healthcare health system. Neonates were included if they received prophylactic caffeine during their hospital stay and were less than 29 weeks gestational age. Neonates were excluded if transferred from another facility, if death occurred on or before the third day of life, or if electronic medical records were inaccessible. The primary outcome was to determine if initiation of caffeine within the first two hours of life would have an effect on the incidence of bronchopulmonary dysplasia or mortality.
Results: In Progress
Conclusions: In Progress
Objective: Discuss the impact of early caffeine initiation on bronchopulmonary dysplasia and mortality in preterm neonates.
Self-Assessment Question: Does the early initiation of caffeine reduce the incidence of bronchopulmonary dysplasia and mortality in preterm neonates?
Link to presentation: https://youtu.be/7QXwO0suw9c

12:30pm – 12:45pm A **170 - Optimizing patient access to high cost new and innovative therapies** Room B

Presenters: Iliana Morataya

Optimizing patient access to high cost new and innovative therapies Iliana Morataya; Kuldip Patel
DUH12 Duke University Hospital (Administration and Leadership with Masters)

SERC Presentation video link: https://youtu.be/olRjT_hp3Zs
Background: New and innovative therapies are becoming available for rare or difficult to treat disease states. Often, these therapies are very costly, making access to these treatments challenging for patients and for health systems. Duke University Health System formed the Clinical Review Board for High Impact Drugs to review cases in which such drugs have been prescribed. The Board is a multidisciplinary team that includes pharmacists, physicians, case managers, and financial personnel. This team meets weekly to review therapies that are administered in clinic and infusion centers with an annual acquisition cost of more than $200,000 per patient. The Board collaborates to review patient need, insurance status, and funding sources. While the Board's priority is to ensure access to these high cost medications, there is also a need for the institution to be reimbursed for these costly medications. Methodology: The purpose of this study is to identify opportunities to improve the current review process of the Board. The goal is to provide more efficient review and for the Board to reflect best practices in helping patients access high cost therapies. The primary endpoint of this study is to evaluate the satisfaction of the Board's review process. This will be measured based on surveys administered to members of the Board and providers who prescribe therapies reviewed by the Board. Both surveys will be measured on a five-point scale ranging from "strongly disagree" to "strongly agree" with a final question allowing for free-text answers. New practices will be introduced to the Board based on the results of the surveys.
Results: In Progress
Conclusions: In Progress
Objective: Identify ways in which the Clinical Review Board for High Impact Drugs strives to be a best practice in ensuring patients can access high cost therapies.
Self Assessment Question: How is the Clinical Review Board for High Impact Drugs functioning to be a best practice for patients receiving high cost therapies?

12:30pm – 12:45pm R **176 - Methylene blue for the treatment of vasoplegia** Room H

Presenters: Catherine Nguyen

Methylene blue for the treatment of vasoplegia
Catherine Nguyen, Jeannie Watson, Adam Wiss, Robin Tagatz
STWH1 St. Thomas West Hospital
Background: The purpose of this study is to determine if the administration of MB improves survival in patients who undergo CPB and experience vasoplegia.
Methodology: 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.
Conclusions: 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.
Objective: Determine if the administration of methylene blue (MB) improves survival in patients who undergo cardiopulmonary bypass (CPB) and experience vasoplegia.
Self Assessment Question: In vasoplegic patients, does the addition of MB improve survival?

Click here to view my presentation https://youtu.be/PxI7wOZJAKQ

12:30pm – 12:45pm R **178 - Comparing Ramelteon and Atypical Antipsychotics for the Treatment of Delirium in Critically Ill Adults: A Retrospective Analysis** Room J

Presenters: Kevin Nofi

Comparing Ramelteon and Atypical Antipsychotics for the Treatment of Delirium in Critically Ill Adults: A Retrospective Analysis

Kevin Nofi; Julia Pate; Julie Stephens

TSCM1 TriStar Centennial Medical Center

Background: Delirium is an alteration in brain function from baseline characterized by confusion, inattentiveness, and decreased cognition. Delirium has been associated with significant negative short- and long-term outcomes such as longer hospital stay, cognitive impairment up to 12 months after ICU discharge, higher mortality rates, and increased healthcare costs. Studies have found mixed results for the efficacy of atypical antipsychotics in successfully treating delirium. Ramelteon is a melatonin receptor agonist that has not been studied in clinical trials as a treatment for delirium, but some retrospective data and case reports suggest it may have a role in treating delirium. The purpose of this study is to compare the effects of ramelteon, atypical antipsychotics, and a combination of ramelteon and atypical antipsychotics on duration of delirium.

Methodology: This study is a retrospective chart review of medical records at a single tertiary care medical center. Delirium was assessed using the documentation of the Confusion Assessment Method for the ICU (CAM-ICU) tool conducted by nursing staff at least twice daily. The primary endpoint was duration of delirium defined as the time between first occurrence of a positive CAM-ICU score and the next occurrence of a CAM-ICU negative score, with no positive score within 24 hours following the negative score.

Results: After enrollment screening, only 2 subjects were able to be included into each group based on CAM-ICU documentation. Delirium status for the other screened patients who received ramelteon is unknown.

Conclusions: Insufficient subjects were enrolled for analysis. Following this study, increased education on CAM-ICU assessments and documentation will be delivered to ICU staff.

Objective: Explain the potential benefits of using ramelteon in treatment of delirium and state the importance of effective CAM-ICU assessments

Self Assessment Question: What is the proposed mechanism of how ramelteon may be effective in treating delirium?

A component of delirium is a disruption of the sleep-wake cycle. Ramelteon is thought to correct the sleep-wake cycle and improve the patient's circadian rhythm

12:30pm – 12:45pm | **169 - INTERRUPTED TIME SERIES ANALYSIS ON IMPACT AND DURABILITY OF AZTREONAM CRITERIA OF USE RESTRICTION WITH AUDIT AND FEEDBACK AT A NON-TEACHING HOSPITAL** Room A

Presenters: Dviti Mody

INTERRUPTED TIME SERIES ANALYSIS ON IMPACT AND DURABILITY OF AZTREONAM CRITERIA OF USE RESTRICTION WITH AUDIT AND FEEDBACK AT A NON-TEACHING HOSPITAL

Dviti Mody, Quentin Minson, Christopher Burke
TSMC1 TriStar Skyline Medical Center

Background: Prospective audit with feedback is a fundamental strategy for antimicrobial stewardship and has been associated with decreased antimicrobial consumption. One approach to strengthen this core strategy is the addition of criteria of use restriction. Lack of evidence exists which analyzes the impact of such a pharmacist driven intervention, particularly at smaller, non-teaching hospitals. Additional research is essential to assess if these interventions are durable and lead to significant improvement in consumption and resistance rates. The purpose of this study is to assess the impact and durability of a criteria of use restriction along with daily audit and feedback on the consumption and resistance rates of aztreonam at a smaller, non-teaching hospital.

Methodology: A retrospective, quasi-experimental study is being conducted on eligible patients greater than or equal to 18 years old, who received at least one dose of aztreonam. A criteria of use restriction intervention on aztreonam was implemented in October 2011. The patients will be analyzed in two groups: pre-intervention and post-intervention. The pre-intervention group includes patients from January 2009 to September 2011 and the post-intervention group includes patients from November 2011 to September 2019. The primary endpoint is assessing long-term aztreonam consumption as defined by daily doses per 1000 adjusted patient days. The secondary endpoints will include the impact on annual aztreonam Pseudomonas susceptibility rates, antibiotic consumption of other antipseudomonal beta-lactams, and adherence by prescribers to the criteria of use restriction.

Results: In Progress

Conclusions: In Progress

Objective: Evaluate the effect of an intervention such as criteria of use restriction on aztreonam, in terms of its consumption and resistance rates on antibiogram, at a smaller, non-teaching hospital.

Self Assessment Question: Does an intervention such as criteria of restriction lead to any significant changes in antimicrobial consumption and resistance rates on antibiogram at a smaller, non-teaching hospital?

YouTube link: https://youtu.be/VBiHAi07zjg

12:30pm – 12:45pm | **171 - THE ROLE OF ORITAVANCIN IN COST REDUCTION FOR TREATMENT OF CELLULITIS IN THE EMERGENCY DEPARTMENT** Room C

Presenters: Christopher Moses

THE ROLE OF ORITAVANCIN IN COST REDUCTION FOR TREATMENT OF CELLULITIS IN THE EMERGENCY DEPARTMENT

C Moses, T Parker, N Badger-Plange, J Chen, E Holland, D Garrett, L Hallman

PIED1 Piedmont Hospital

Background: Acute bacterial skin and skin structure infections (ABSSSIs) account for roughly 2.3 million emergency department (ED) visits in the United States annually. The treatment of choice for certain ABSSSIs has traditionally been intravenous (IV) vancomycin. In 2014, oritavancin was approved by the FDA for treatment of ABSSSIs. Oritavancin requires a single dose, eliminating the need for admission. Treatment of ABSSSIs without admission has an estimated savings of $2,500 to $6,500 per patient. The purpose of this study is to assess the impact of adding oritavancin to the formulary for management of ABSSIs.

Methodology: This was a retrospective and prospective study consisting of patients age 18 years or greater, seen in the ED at Piedmont Atlanta Hospital with a preliminary diagnosis of cellulitis. Patients were included in the retrospective arm if they were admitted from January through November 2019 and received vancomycin for the treatment of ABSSSI. The prospective arm consisted of patients who presented between January and April 2020, received oritavancin, and were discharged from the ED. Patients with other co-morbidities requiring inpatient admission were excluded. The endpoints assessed were the difference in 30-day readmission rates, length of stay, and cost-per-patient between the two cohort groups.

Results: In the retrospective arm, a total of 57 out of the 284 patients assessed met the criteria for oritavancin treatment. Two of these patients had a 30-day readmission related to cellulitis. The average length of stay was 3.4 days. Thus far, no prospective data has been collected.

Conclusions: In Progress

Objective: Outline the role of oritavancin as a treatment option and cost savings measure for treatment of uncomplicated cellulitis in the ED.

Self Assessment Question: What is the impact of adding oritavancin to the hospital formulary for treatment of uncomplicated cellulitis in the ED?

https://youtu.be/jBhjUlmdJKk

12:30pm – 12:45pm | **173 - Appropriate Use of Antimicrobials in Patients with Sepsis or Septic Shock** Room E

Presenters: Nassim Najafisales

Appropriate Use of Antimicrobials in Patients with Sepsis or Septic Shock

Nassim Najafisales, Naadede Badger-Plange,Julia E. Coluccio, Heather Powell
PIED1 Piedmont Hospital

Background: The 2016 Surviving Sepsis Campaign (SSC) guideline recommends administration of broad-spectrum antibiotics within one hour after recognizing sepsis as well as source control. Guidelines also recommend appropriate fluid resuscitation with 30 mL/kg intravenous crystalloid within three hours and to initially maintain a mean arterial pressure (MAP) of 65 mmHg. Currently, at Piedmont Healthcare, clinicians utilize a sepsis protocol that provides antimicrobial recommendations based on the suspected origin of infection. The purpose of this analysis is to determine whether appropriate antimicrobials were initiated in patients with sepsis or septic shock at Piedmont Atlanta Hospital.

Methodology: This study was conducted via a retrospective chart review at Piedmont Atlanta Hospital. The patient population consisted of 100 randomly selected patients with sepsis or septic shock from January 2019 through December 2019. The primary endpoint was the appropriate use of empiric antimicrobials based on suspected origin of infection in patients with sepsis or septic shock. Secondary endpoints included: length of stay (LOS), total duration of antimicrobials, appropriate use of intravenous fluids per SCCM guidelines, and 28-day mortality. Categorical data was analyzed using chi-squared and continuous variables were analyzed using student t-test.

Results: Of the 100 patients, 61% of patients were initiated on appropriate empiric antimicrobials. When comparing appropriate versus inappropriate empiric antimicrobial groups: average length of stay was 4.95 versus 5 days (p value equals 0.91), average total duration of antimicrobials was 12.2 versus 13.1 days (p value equals 0.65), appropriate administration of intravenous fluids per SCCM guidelines 82% versus 69.2% (p value equals 0.218), and 28-day mortality was 6.6% vs. 17.9% (p value equals 0.076).

Conclusions: In Progress

Objective: Evaluate the impact of a sepsis protocol on initiation of appropriate antimicrobials

Self Assessment Question: Does a sepsis protocol that includes suspected origin of infection with recommended antimicrobials help guide appropriate antimicrobial initiation?

Link to SERC presentation: https://vimeo.com/409613812

12:30pm – 12:45pm | **175 - Clinical outcomes in epidural abscess patients treated with ceftriaxone every 24 hours versus every 12 hours** Room G

Presenters: Anh Nguyen

Clinical outcomes in epidural abscess patients treated with ceftriaxone every 24 hours versus every 12 hours

Anh Nguyen, Joy Peterson, Erin Massarello

WellStar Kennestone Hospital

Background: An epidural abscess is a rare central nervous system (CNS) infection involving the formation of a pus-filled sac between the dura mater and vertebrae. CNS infections can be difficult to treat due to barrier mechanisms preventing drugs from reaching the site of action. Ceftriaxone is commonly used to treat spinal epidural abscesses because of its CNS penetration. It is given every 12 hours for CNS infections rather than the usual dosing of every 24 hours. Since the location of the abscess is often limited to above the dura mater, controversy exists on whether full CNS dosing is required. Unfortunately, the IDSA Clinical Practice Guidelines for the Diagnosis and Treatment of Native Vertebral Osteomyelitis in Adults do not address patients with spinal epidural abscesses. This gap in the literature calls for further research to optimize ceftriaxone for these patients.

Objective: Evaluate clinical outcomes in patients receiving ceftriaxone every 12 hours versus every 24 hours for the treatment of spinal epidural abscess

Methodology: This was a retrospective, multicenter, cohort study conducted within the Wellstar Health System from January 1, 2014 to July 31, 2019. Patients ages 18 years or older admitted with a confirmed diagnosis of spinal epidural abscess who were treated with ceftriaxone for more than 72 hours were included. Exclusion criteria were pregnant patients, patients with polymicrobial epidural abscess infection, or patients with infections not susceptible to ceftriaxone. The primary endpoint is clinical cure defined as lack of need for further antibiotics for epidural abscess due to ceftriaxone treatment, physician documentation of cure, repeat imaging showing resolution, or repeat negative culture data. Secondary endpoints are length of stay, and safety.

Results: In Progress

Conclusions: In Progress

Self Assessment Question: Why is the dosing of ceftriaxone controversial for the treatment of epidural abscess infections?

Link to Presentation: https://youtu.be/FNff2Z2f8og

12:30pm – 12:45pm | **180 - Impact of Targeting AUC:MIC vs Trough for Vancomycin Dosing in the Neuroscience Intensive Care Unit** Room L

Presenters: Cara Nys

Impact of Targeting AUC:MIC vs Trough for Vancomycin Monitoring in the Neuro ICU

Cara Nys, Donna Ha, Benjamin Albrecht, Bill Asbury
EUHA1 Emory University Hospital

Background: Vancomycin troughs have been used as surrogates for the daily area under the concentration-time curve to minimum inhibitory concentration (AUC:MIC), the true parameter predictive of vancomycin activity against Staphylococcus aureus. Data has shown AUC:MIC-based dosing may reduce vancomycin exposure and nephrotoxicity compared to trough-based dosing, but there still remains limited data regarding AUC:MIC-based monitoring in Neurological (Neuro) Intensive Care Unit (ICU) patients.

Methodology: This was a prospective observational study of adults who received vancomycin in the Neuro ICU at Emory University Hospital from Sep 2019 to Mar 2020. Exclusion criteria included patients with unstable renal function prior to initial concentration, dialysis during therapy, or no concentration drawn within the first 72-hours of therapy. The primary outcome was the incidence of target attainment within 72-hours.

Results: Fifteen patients in the AUC:MIC-based group and 21 patients in the trough-based group were included. Baseline charactersitics were similar between the two groups. Most patients received vancomycin for presumed pneumonia or central nervous system infections. Overall, 58% of therapy was empiric. The incidence of target attainment within 72-hours was 73% for the AUC:MIC-based group and 33% for the trough-based group, p=0.018.

Conclusions: Patients who receive vancomycin AUC:MIC-based monitoring may be more likely to achieve target concentrations within 72-hours compared to those who receive trough-based monitoring. Larger studies are needed to further evaluate clinical outcomes.

Objective: To compare the incidence of attaining target vancomycin concentrations in Neuro ICU patients managed with AUC:MIC-based vancomycin monitoring compared to those managed with trough-based monitoring.

Self Assessment Question: What is the value of targeting a vancomycin AUC:MIC of 400-600 versus targeting a trough of 15-20 mg/L in patients with severe infections?

Link to presentation: https://youtu.be/OdgA5oXxIPE

12:30pm – 12:45pm L **177 - Body-weight versus standard dosing for unfractionated heparin (UFH) in hospital-acquired venous thromboembolism (HA-VTE) in obese patients** Room I

Presenters: Elizabeth Vi Nguyen

Abbreviated Title: Body-weight versus standard dosing for unfractionated heparin (UFH) in hospital-acquired venous thromboembolism (HA-VTE) in obese patients

Authors: Vi Nguyen, Quyen Bach, Nana Agyemang-Mensah, Alex Aw, Kayla Saxton
PPMH1 Phoebe Putney Memorial Hospital/The University of Georgia

Background: Current guidelines recommend standard dose (SD) of UFH for VTE prophylaxis in most hospitalized patients with no recommendations for body-weight dosing (BWD) even through treatment dosing of UFH is weight-based. Thr purpose was to evaluate the efficacy of BWD in hospitalized obese patients.

Methods: This case-control study included patients who were ≥ 18 with a BMI ≥ 30 kg/m2 or weight ≥ 100 kg. All patients had to receive ≥ 1 dose of UFH within 48 hours of admission. The two cohorts, case (diagnosed with VTE) and control (not diagnosed with VTE) were matched using age and length of stay. The exposure to SD (5000 units every 8 or 12 hours) or BWD (7500 units every 8 h ours) were evaluated. The primary objective evaluated the asosciation between the VTE occurrences and different dosing methods. The secondary objectives evaluated the association between bleeding and different dosing methods and adherence to a pharmacist-driven protocol.

Results: The case and control cohorts consisted of 11 and 44 patients, respectively. The odds of VTE occurrences (odds ratio (OR) 0.014; p-value (p) <0.0001), major bleeding (OR 0.024; p=0.223), and minor bleeding (OR 0.159; p=0.98) were lower with the exposure to BWD. Because no cases utilized BWD, the protocol adherence objctive were indeterminate.

Conclusion: The exposure to BWD of UFH for VTE prophyalxis in hospitalized obese patients were associated with fewer VTE occurrences. This is statistically and clinically significant. Due to many limitations, more data is needed to assess the efficacy of BWD.

Objective: Determine the association between different dosing of unfractionated heparin for venous thromboembolism prophylaxis in hospitalized obese patients to various outcomes

Asessment Question: A 56-year-old female with a BMI of 47.3 kg/m2 was admitted for pneumonia. PMH consists of end-stage renal disease and diabetes. What dose of unfractionated heparin for venous thromboembolism prophylaxis would you recommend?

Video link: https://www.youtube.com/watch?v=Hr83jjJPNRo

Please contact Vi Nguyen at enguyen@phoebehealth.com with any questions!

12:30pm – 12:45pm L **179 - Thrombotic and bleeding event incidence in obese versus non-obese patients treated with direct oral anticoagulants** Room K

Presenters: Justine Nurse-McLeod

Thrombotic and bleeding event incidence in obese versus non-obese patients treated with direct oral anticoagulants

Justine Nurse-McLeod; Yolanda Whitty
WSCH1 WellStar Cobb Hospital

Background: To date, evidence regarding the safety and efficacy of direct oral anticoagulants (DOACs) in obese patient populations is minimal and conflicting. While the International Society on Thrombosis and Haemostasis (ISTH) recommends against the use of DOACs in patients with a body mass index (BMI) greater than 40 kg/m2, current DOAC package inserts fail to address use in patients with advanced BMI, bringing into question the validity of this warning. The purpose of this study was to assess the safety and efficacy of DOACs in obese patients, based upon the incidence of bleeding and thrombotic events occurring within patient groups stratified according to BMI.

Methodology: This retrospective chart review included patients age 18 years and older, admitted to WellStar Health System and prescribed on-label DOAC therapy for VTE treatment and/or the prevention of stroke and systemic arterial embolism in atrial fibrillation. Patients were stratified into five study arms based on the National Institutes of Health standard BMI classifications. Primary endpoints included the incidence of thrombotic events, defined as radiologically proven new or progressive thrombosis and/or emboli occurring at any location/site within the venous or arterial vasculature and the incidence of major or non-major bleeding events, as defined by the ISTH.

Results: In progress

Conclusions: In progress

Objective: Identify differences in the safety and efficacy of DOAC therapy in patients across BMI categories.

Self Assessment Question: What is the current recommendation from the ISTH regarding DOAC therapy in obese patients?

12:30pm – 12:45pm O **172 - Predictors of Hematologic Toxicity with PARP Inhibitors: A Focus on BRCA Status** Room D

Presenters: Kristina Murphy

Predictors of Hematologic Toxicity with PARP Inhibitors: A Focus on BRCA Status

Kristina Murphy, Kristina Byers, Aseala Abousaud, Elisavet Paplomata
EUHM1 Emory University Hospital Midtown

Background: Identify risk factors contributing to hematologic toxicities associated with PARPi.

Methodology: A retrospective chart review was conducted on all adult cancer patients who received at least one dose of a PARPi from December 1, 2014 until November 1, 2019. Patients were assigned to one of the following cohorts based on BRCA status: germline BRCA mutation (gBRCAm), non-germline BRCA mutation (non-gBRCAm), and BRCA wild-type (BRCAwt). Patients enrolled in a clinical trial or pregnant will be excluded. The primary outcome was incidence of CTCAE $\geq$ grade 2 hematologic toxicity (defined as anemia, neutropenia or thrombocytopenia) in all tumor types.

Results: Overall, 88 patients met the outlined inclusion criteria. The studied population was majority female with ovarian cancer. Majority of patients were heavily pretreated with at least 3 lines of prior therapy. Olaparib was the most common PARPi prescribed. Finally, 77% of patients were initiated on full dose PARPi. There was no significant difference in $\geq$ grade 2 hematologic toxicity based on BRCA mutation status. Anemia was the most common hematologic toxicity observed. Additionally, there was no statistically significant difference noted among groups, with the exception of off-label use favoring BRCAwt. The BRCAwt group had the highest cumulative incidence of hematologic toxicity among cohorts. Within the first month of PARPi initiation, the BRCAwt group had a 50% cumulative incidence while the two BRCA mutation groups had a cumulative incidence of 30%.

Conclusions: Incidence of grade 2 or higher hematologic toxicity was similar despite differences in BRCA mutation status. There were no significant differences in the incidence of secondary safety outcomes although off label use was significantly more common in the BRCAwt cohort. As PARPi continue to become more widely used, larger studies are needed to further characterize parameters for starting dose reductions for each PARPi individually.

Objective: Identify risk factors contributing to hematologic toxicities associated with PARP inhibitors.

Self Assessment Question: What is the most common toxicity associated with PARP inhibitors?

Link to Presentation: https://youtu.be/w3t2B1jA93A

12:30pm – 12:45pm D **174 - Efficacy Comparison between Poractant Alfa and Cafactant in Premature Infants with Respiratory Distress Syndrome** Room F

Presenters: Anh Nguyen

Efficacy Comparison between Calfactant and Poractant alfa in Premature Infants with Respiratory Distress Syndrome

Anh Nguyen, Stephanie Oeters

EDHD1 Emory Decatur Hospital

Background: Respiratory distress syndrome (RDS) is a common cause of morbidity and mortality in premature infants due to alveolar surfactant deficiency. There are limited studies directly comparing calfactant and poractant alfa. The purpose of this study is to evaluate the recent switch of calfactant to poractant alfa at a 52-bed level III Neonatal Intensive Care Unit (NICU).

Methods: This is a retrospective cohort case control study including premature infants born at 35 weeks or earlier who were admitted to the NICU with RDS and treated with calfactant or poractant alfa. The primary outcome was the percentage of patients that required re-dosing. The secondary outcomes were mean FiO2 at 8- and 24-hours post surfactant, extubation rate, re-intubation rate, and overall cost. The primary outcome was stratified by gestation age and birth weight for each surfactant.

Results: One hundred eleven patients received calfactant and 19 patients received poractant alfa. The need for repeat doses was 34% in calfactant-treated patients and 32% in poractant alfa-treated patients. There was no difference observed in mean FiO2 at 8- and 24-hours post surfactant from baseline. A higher percentage of calfactant patients were extubated within 48-72 hours post surfactant (38%) than poractant alfa patients (14%). Four patients in the calfactant group required re-intubation and none in the poractant alfa group. Average cost per patient cost for poractant alfa ($936.11) was 71% higher than for calfactant ($548.25).

Conclusion: Our preliminary results showed no difference in the percentage of patients that required re-dosing after the recent switch to poractant alfa. The plan is to continue collecting data for poractant alfa to meet adequate sample sice for statistical analysis.

Objective: To compare efficacy of poractant alfa and calfactant in the neonatal RDS setting.

Self Assessment Question: Does switching from calfactant to poractant alfa reduce the need for additional surfactant doses?

Link to YouTube: https://www.youtube.com/watch?v=Mjl0yKZ9_w4

12:45pm – 1:00pm B **190 - Dulaglutide: effectiveness at A1C reduction and patient tolerance to therapy** Room J

Presenters: Kiara Parker

Dulaglutide: effectiveness at A1C reduction and patient tolerance to therapy

Kiara K. Parker; Courtney Crawford

BVAM1 Brimingham VA Medical Center

Background: It is well known that poor glycemic control affects major organs of the body. Initial management of type-2 diabetes is with metformin monotherapy or dual-therapy with metformin and an injectable if A1C >10%. Injectable therapies are also included in treatment as second-line options if metformin alone does not reduce A1C to goal. GLP-1 agonists are injectable antidiabetic agents that help to maintain glycemic control. Dulaglutide became the preferred GLP-1 agonist at Birmingham VA Medical Center in May 2018. The purpose of this project is to investigate dulaglutide effectiveness by analyzing A1C reduction and evaluate patient tolerance by examining discontinuations.

Methodology: A retrospective chart review was conducted by reviewing electronic medical records. Data was collected on patients receiving dulaglutide prescriptions during the time period of May 2018 to May 2019. Information gathered included dulaglutide dose, A1C prior to dulaglutide initiation, A1C 3 months after dulaglutide initiation/titration, dulaglutide refill information, and discontinuations of therapy due to side effects. The goal is to determine whether A1C reduction is as expected compared to clinical trials and gauge whether patient intolerance could become a deterrent to use.

Results: In Progress

Conclusions: In Progress

Objective: Identify the main adverse effect leading to discontinuation of dulaglutide therapy

Self Assessment Question: What adverse effect is most commonly experienced by patients on dulaglutide therapy?

(a) Constipation (b) Vomiting (c) Nausea (d) Abdominal Pain

Answer: All listed choices are possible adverse effects; however, Nausea has been reported in up to 21% of patients on dulaglutide therapy.

12:45pm – 1:00pm C **186 - Discharge prescribing patterns in patients admitted with heart failure with reduced ejection fraction exacerbations** Room F

Presenters: Alyssa Osmonson

Discharge prescribing patterns in patients admitted with heart failure with reduced ejection fraction exacerbations
Alyssa Osmonson, Jessica Starr, Kenda Germain, Mary Katherine Stuart
PBMC1 Princeton Baptist Medical Center

Background: Current guidelines recommend the use of an angiotensin-converting enzyme inhibitor (ACEI), angiotensin II receptor blocker (ARB), or angiotensin II receptor-neprilysin inhibitor (ARNI) in conjunction with an evidence-based beta blocker for all patients with heart failure with reduced ejection fraction (HFrEF) to reduce morbidity and mortality. The purpose of this study is to determine if patients admitted for a heart failure exacerbation at Princeton Baptist Medical Center are being discharged on guideline-directed medical therapy (GDMT).
Methodology: This IRB approved study is a retrospective, single-center chart review. Patients admitted for a heart failure exacerbation from August 1, 2017 to July 31, 2019 were screened. Those included were 18 years and older with echocardiogram documentation of an ejection fraction of £40%. Patients were excluded from the study if they had a history of a heart transplant, were pregnant at the time of admission, or died during admission. The primary outcome is the percentage of patients discharged on GDMT. Secondary outcomes include percentage of patients discharged on a medication from each individual class listed above, documented reasons why GDMT was not prescribed, and percentage of patients readmitted within 30 days directly related to heart failure.
Results: Of those included, 57% (n = 125) of patients were not discharged on GDMT. The readmission rate related to HFrEF was 22% in each group (p = 0.875). The majority of patients not discharged on a RAAS inhibitor had a valid reason not to receive one of those agents. However, the majority of those not discharged on an evidence-based beta blocker did not have a valid documented reason to not receive one.
Conclusions: Discharge prescribing patterns as they relate HFrEF at our hospital are largely not in accordance with GDMT recommendations. This did not lead to a statistically significant difference in readmission rates.
Objective: Identify if appropriate, guideline-directed medical therapy was prescribed at discharge following admission for HFrEF exacerbation
Self Assessment Question: What is GDMT as it pertains to HFrEF?

https://youtu.be/ZiYq7IRUAPI

12:45pm – 1:00pm C **189 - Assessment of Apixaban versus Warfarin Use for Patients with Atrial Fibrillation and Severe or End Stage Kidney Disease** Room I

Presenters: Anna Parker

Assessment of Apixaban versus Warfarin Use for Patients with Atrial Fibrillation and Severe or End Stage Kidney Disease
Anna Parker, Brendon Banes, Kathleen Jerguson
WSKH1 WellStar Kennestone Hospital

Background: Patients with atrial fibrillation and chronic kidney disease have risk factors that may lead to bleeding and clotting events. Therefore, it is important to have a clear anticoagulation strategy that is safe and effective for this patient population. The purpose of this study is to assess the safety and efficacy of apixaban versus warfarin in patients with atrial fibrillation and severe or end stage kidney disease.

Methodology: This study was a retrospective, multi-center, cohort design. Included patients were 18 years or older, had apixaban or warfarin listed on their inpatient or home medication list as of July 1, 2018, had a diagnosis of atrial fibrillation, and had severe or end stage renal disease regardless of dialysis status. Patient charts were reviewed for the following year (July 1, 2018 to June 30, 2019) to assess for safety and efficacy outcomes. Safety was evaluated by classifying bleeding events which led to hospital presentations. Major bleeding events were classified as severe or moderate according to GUSTO criteria. Efficacy was assessed by identifying the incidence of ischemic stroke and systemic embolism.

Results: In progress

Conclusions: In progress

Objective: Describe the safety and efficacy of apixaban and warfarin when used in patients with atrial fibrillation and severe or end stage kidney disease.

Self Assessment Question: Is anticoagulation with apixaban an appropriate option for patients with atrial fibrillation and severe or end stage kidney disease?

Link to Presentation: https://youtu.be/Jxi0JGgE1nA

12:45pm – 1:00pm C **192 - Evaluation of Dual Antiplatelet Therapy Versus Aspirin in Patients Undergoing Transcatheter Aortic and Mitral Valve Interventions** Room L

Presenters: Darshan Patel

Evaluation of Dual Antiplatelet Therapy Versus Aspirin in Patients Undergoing Transcatheter Aortic and Mitral Valve Interventions

Darshan Patel, Nicholas Barker, Leslie Ogburn, James Stewart
Emory St. Joseph's Hospital of Atlanta

Background: Transcatheter aortic valve replacement (TAVR) and mitral valve repair are emerging alternative options for patients with severe aortic stenosis or significant symptomatic mitral valve regurgitation. Even with a high success rate, vascular complications such as myocardial infarction (MI) and ischemic stroke occur in approximately 1 to 3% of patients. To reduce the risk of thrombotic complications, patients are initiated on antithrombotic therapy following implantation. Current guidelines recommend dual antiplatelet therapy (DAPT) with aspirin and clopidogrel following TAVR to prevent device-related thromboembolic complications. However, one of the major risks associated with DAPT is bleeding. Recent studies comparing the efficacy of DAPT versus aspirin alone in preventing ischemic events following this procedure have not found significant differences between the two groups but higher incidences of major or life-threatening bleeding events in the DAPT group. Due to concern for inadequate platelet inhibition with aspirin 81 mg, our institution currently uses higher doses of aspirin post implantation. The purpose of this study is to compare safety and efficacy outcomes of DAPT versus higher doses of aspirin alone in patients following TAVR and mitral valve repair at Emory St. Joseph’s Hospital.

Methodology: This is a single center retrospective chart review of all adult TAVR and mitral valve repair patients at Emory Saint Joseph’s Hospital (ESJH) from October 2017 to October 2019, that were subsequently started on antithrombotic therapy with DAPT or aspirin 162 mg at ESJH. Patients that were on DAPT prior to procedure, on chronic anticoagulant therapy, had a major bleed within 3 months prior to procedure, or reported allergy to aspirin/clopidogrel were excluded from the study.

Results: A total of 113 patients were included, 61 who received DAPT and 52 who received aspirin alone following TAVR or mitral valve repair. The composite of death, MI, stroke or transient ischemic attack tended to occur more frequently in the DAPT group (9.94% vs. 3.85%, p = 0.284). There was a total of 4 deaths, all of which occurred in the DAPT group (DAPT, 6.56%; ASA, 0%; p = 0.123). There were no differences between groups in the occurrences of MI (no MI events in both groups), or stroke or transient ischemic attack (DAPT, 3.28%; ASA, 3.85%). In addition, there were no differences between groups in the occurrences of major or life-threatening bleeding events (DAPT, 4.92%; ASA, 5.77%) and valve thrombosis (DAPT, 1.64%; ASA, 1.92%).

Conclusions: This small retrospective, single center study showed that when compared to DAPT, aspirin 162 mg did not increase the risk of MI, stroke, or valve thrombosis with similar occurrence of major or life-threatening bleeding.

Objective: Discuss the safety and efficacy outcomes of DAPT versus aspirin alone in patients following TAVR and mitral valve repair at Emory Saint Joseph’s Hospital

Self Assessment Question: What is the optimal antithrombotic therapy following TAVR and mitral valve repair?

Youtube link to presentation: https://youtu.be/cW45Lj9Tg-8

12:45pm – 1:00pm R **183 - Evaluation of Levetiracetam Dosing Strategies for Seizure Prophylaxis in Traumatic Brain Injury** Room C

Presenters: Kelsey Ohman

Evaluation of Levetiracetam Dosing Strategies for Seizure Prophylaxis in Traumatic Brain Injury
Kelsey Ohman, Bridgette Kram, Jennifer Schultheis, Jana Sigmon
DUCC2 Duke University Hospital (Critical Care)

Background: Post-traumatic seizures are a potential sequelae of traumatic brain injury (TBI) which contribute to significant morbidity and mortality for affected patients. The landmark randomized, controlled trial completed by Temkin and colleagues demonstrated a significant decrease in early post-traumatic seizures following severe TBI in patients given phenytoin prophylaxis compared to those who did not. In recent years, levetiracetam has been increasingly utilized as an alternative agent to phenytoin due to fewer adverse effects, fewer drug interactions, ease of administration, and absence of routine therapeutic drug monitoring. However, there is a paucity of data in the available literature regarding the effectiveness of various levetiracetam dosing strategies when utilized for this indication. In the current literature, maintenance doses of levetiracetam for post-traumatic seizure prophylaxis have ranged from 500 mg to 1000 mg twice daily. The aim of this study is to determine whether different dosing strategies of levetiracetam are associated with the incidence of early post-traumatic seizures when utilized as prophylaxis following traumatic brain injury.

Methodology: This retrospective case-control study conducted at a Level I Trauma Center will include admitted adult patients with a diagnosis of TBI and receiving levetiracetam for early post-traumatic seizure prophylaxis between July 1, 2013 and September 1, 2019. Patients were excluded if they had a past medical history of seizure disorder prior to TBI and actively receiving an anti-epileptic drug at time of admission, documented seizure prior to levetiracetam administration during index hospital admission for TBI, death within 24 hours of hospital admission, greater than 24 hours between hospital admission and initiation of levetiracetam, <2 doses of levetiracetam, or a past medical history of end-stage renal disease. Levetiracetam dosing for post-traumatic seizure prophylaxis was guided by the treating clinician. Standard of care management for TBI was in concordance with the current Brain Trauma Foundation Guidelines and directed by the multidisciplinary team. The primary outcome will be the total daily absolute maintenance dose of levetiracetam in patients who experienced early post-traumatic seizures compared to those who did not. Secondary outcomes will include the total daily weight-based maintenance dose of levetiracetam and total absolute and weight-based loading dose of levetiracetam in patients who experienced early post-traumatic seizures compared to those who did not. Additional secondary outcomes included the occurrence of early post-traumatic seizures in patients receiving levetiracetam total daily absolute maintenance doses of <1500 mg/day and >1500 mg/day, total daily weight-based dosing <20 mg/kg/day and >20 mg/kg/day, and time to occurrence of post-traumatic seizures.

Results: In Progress

Conclusions: In Progress

Objective: To evaluate the impact of levetiracetam dosing strategies on the occurrence of post-traumatic seizures

Self Assessment Question: Which of the following statements is true regarding the use of anti-epileptic drugs for seizure prophylaxis following traumatic brain injury?

12:45pm – 1:00pm R **185 - The efficacy and safety of methylnaltrexone for the treatment of postoperative ileus** Room E

Presenters: Lindsay Orton

The efficacy and safety of methylnaltrexone for the treatment of postoperative ileus

Orton L, Beavers J, Atchison L, Smith M, Medvecz A

VUMC1 Vanderbilt University Medical Center

Background: Postoperative ileus (POI) is a known complication of surgery resulting in increased hospital length of stay. The current standard of care for postoperative ileus consists of bowel rest with nutrition support, stomach decompression via a nasogastric tube, and bowel regimen including suppositories and/or enemas. It has been questioned whether a peripheral opioid antagonists such as methlynaltrexone (MNTX) could be used as a treatment for POI leading to quicker resolution and shorter hospital LOS. The purpose of this study is to determine if MNTX is safe and effective for the treatment of POI.

Methodology: A single-center, retrospective, cohort study was conducted at Vanderbilt University Medical Center (VUMC) to assess the efficacy and safety of MNTX for the treatment of POI. Surgical patients > 18 years of age diagnosed with a POI were included in the analysis. Patients with a small bowel obstruction, gastrointestinal malignancy, or who received alvimopan were excluded. The patients were stratified into 2 cohorts: those that received standard of care versus those that received MNTX in addition to the standard of care for treatment of POI. The primary outcome of this study was time to resolution of ileus, which was defined as return of bowel function and tolerance of enteral nutrition. Secondary outcomes included hospital length of stay, number of patients requiring TPN, and adverse events specifically bowel perforations requiring abdominal operation.

Results: In Progress

Conclusions: In Progress

Objective: Assess the benefit and safety of using methylnaltrexone for treatment of postoperative ileus

Self Assessment Question: True or false: MNTX showed a significant benefit of decreasing time to resolution of ileus

12:45pm – 1:00pm R **191 - Evaluation of Clinical Response to HIT (Heparin Induced Thrombocytopenia) Panels and Subsequent Therapy Decisions** Room K

Presenters: Marisa Pasquale

Evaluation of Clinical Response to HIT (Heparin Induced Thrombocytopenia) Panels and Subsequent Therapy Decisions

Marisa Pasquale, Alex Ward

UAHC2 University of Alabama at Birmingham Hospital (Critical Care)

Background: To evaluate how clinicians respond to the suspicion of heparin induced thrombocytopenia (HIT) and whether or not guideline recommendations are truly being followed.

Methodology: This study was a retrospective chart review that included patients with HIT panels drawn between January 1st, 2015 and December 31st, 2018. The primary outcome of this study was to analyze the therapeutic response to HIT suspicion in patients at UAB Hospital (i.e. whether or not anticoagulation therapy was changed, information regarding alternate anticoagulation, whether or not the patient's allergy list was updated). Secondary outcomes included the adverse events of thromboembolism or major bleeding.

Results: 148 patients were included in this study, with a majority of patients on heparin continuous infusions (n = 61, 41.2%). HIT was confirmed in 32 patients (21.6%) as proven by a positive ELISA and SRA. Heparin therapy was changed empirically in 81 patients (54.7%). Time from HIT suspicion to alternate anticoagulation varied – 48 patients (59.2%) had therapy changed within 24 hours of HIT suspicion, 20 patients (24.7%) within 24 – 48 hours, 7 patients within 48 – 72 hours (8.6%), and 6 patients > 72 hours (7.4%). The most common class of medications ordered was direct thrombin inhibitors (n= 68, 83.9%) for a median duration of 4 days (range 1 – 30 days). Of the 116 patients with a negative SRA, heparin therapy was resumed in 51 patients (44.7%). Of the 32 patients with confirmed HIT, 29 patients (90.6%) had their allergy list correctly updated. 31 patients experienced thromboembolism (most commonly lower extremity deep vein thrombosis). Major bleeding occurred in 10 patients.

Conclusions: While a majority of clinicians had an appropriate clinical response to HIT suspicion, further education is needed for the management of these patients. This is an area where pharmacists can make meaningful interventions.

Objective: List evidence-based clinical therapies for the management of patients with suspected heparin induced thrombocytopenia.

Self Assessment Question: Which medications have evidence supporting their use in heparin induced thrombocytopenia?

12:45pm – 1:00pm | **187 - Impact of Procalcitonin on Antibiotic Utilization in Community Acquired Pneumonia Patients** Room G

Presenters: Sarah Owenby

Impact of Procalcitonin on Antibiotic Utilization in Community Acquired Pneumonia Patients
Sarah D. Owenby, Barry G. Barns, Kinjal V. Sidhpura
NGMC1 Northeast Georgia Medical Center

Background: The procalcitonin assay has emerged as a potential antimicrobial stewardship tool in patients with community acquired pneumonia (CAP). However, some studies have shown no significant reduction in duration of antibiotic therapy with the use of a procalcitonin algorithm. Northeast Georgia Medical Center (NGMC) does not currently have literature-based guidance regarding procalcitonin interpretation and timing. Furthermore, procalcitonin utilization data at NGMC suggests that procalcitonin is not being effectively optimized as a guide for antibiotic management.

Methodology: We conducted a retrospective chart review of patients 18 years of age or older admitted with a diagnosis of CAP between October 2018 and October 2019. Patients were separated into two groups: patients with CAP who had a procalcitonin result and patients with CAP without a procalcitonin order and result. Patients were randomly selected from each group, and the primary endpoint was the difference in the number of antibiotic days between the two groups. Secondary endpoints included the incidence of C. difficile colitis, length of stay, and in-hospital mortality.

Results: This retrospective chart review included 200 patients. Median duration of antibiotic therapy for both the procalcitonin group and the non-procalcitonin group was 8 days each (p=0.594). Median length of stay was longer in the procalcitonin group than in the non-procalcitonin group (6 days vs. 4 days; $p < 0.001$). There was no statistical difference in in-hospital morality and incidence of *C. difficile* colitis between the two groups (p=0.054 and p=0.155, respectively).

Conclusions: This study demonstrates that the use of the procalcitonin assay was not associated with a shorter duration of antibiotic therapy in patients with CAP. There is opportunity for improvement and optimization of the use of procalcitonin as an antimicrobial stewardship tool at Northeast Georgia Medical Center.

Objective: Evaluate the effect of serum procalcitonin on antibiotic duration and patient outcomes in patients diagnosed with community acquired pneumonia at Northeast Georgia Medical Center.

Self Assessment Question: Procalcitonin results aid antimicrobial stewardship efforts in
A. Reducing antimicrobial duration
B. Narrowing antimicrobial therapy
C. Prompting initiation of antibacterial therapy
D. Prompting initiation of anti-viral therapy

https://youtu.be/7GjAVwvZEss

12:45pm – 1:00pm L **184 - Implementing and evaluating women's health clinical services at a large community hospital** Room D

Presenters: Claudia Ortiz-Lopez

Obstretic services have the opportunity for pharmacist involvement due to specialized knowledge required for the use of medications during pregnancy and lactation, and potential high risk associated with errors and adverse events. There is still a large unmet demand of pharmacist's co-management of therapies in pregnancy and overall women's health. In certain health systems, there is still no clinical pharmacy specialist focused on women's services who can provide customized services to this patient population. The purpose of this study is to assess the need for a clinical pharmacy specialist in women's health units.

This was a single-center, institutional review board approved assessment of services. The study consisted of a retrospective chart review to evaluate interventions performed by centralized pharamcists for women's health patients during December 2018, and a prospective assessment of pharmacy services targeting women's health patients during December 2019. Women's services areas that incorporated patients receiving antepartum and postpartum care were included. The primary endpoint was cost analysis of services provided to this population.

In 2018, 252 documented interventions were made, compared to 621 interventions made in 2019. In 2018, the average cost saved from interventiosn that pharmacists made in the women's health units was 63.59, compared to 75.92 in 2019 (p-value = 0.0101). Overall, most interventions were in the Mother Baby unit (48.57%), followed by Women's Care (27.7%), Special Maternity (21.5%), and Labor and Delivery (2.06%).

A clinical pharmacist dedicated to the women's services areas may be beneficial in a large community hospital by providing more interventions that can be cost saving for a large health system. Further assessment is needed to determine how best to provide new services in accordance with the pharmacy practice model at a large community hospital.

12:45pm – 1:00pm M **182 - Initiative to minimize pharmaceutical risk in a veteran population by implementation of on-site medication take-back receptacles** Room B

Presenters: Caitlyn Ocampo

Initiative to minimize pharmaceutical risk in a veteran population by implementation of on-site medication take-back receptacles

Caitlyn Ocampo, Erin Amadon

FVMC1 Fayetteville VA Medical Center

Background: Currently within the Department of Veteran's Affairs (VA), two methods for medication disposal are available; TakeAway envelopes or disposal receptacles. Presently, our VA practice site only employs TakeAway envelopes. The purpose of this project is to enhance and expand upon medication disposal methods at our facility.

Methodology: This multicenter, prospective cohort analysis is a quality improvement initiative. Disposal receptacles were scheduled to be installed in August 2019 at three sites within the Fayetteville Veteran's Affairs enterprise. A memorandum was developed to establish policies for handling returned medications. Education on current and upcoming disposal methods were provided to patients and staff in April 2019. Change in total weight of collected medications after installation will serve as the primary endpoint. Secondary outcomes include the change in the number of TakeAway envelopes returned for the three months prior to and following education before receptacle installation, change in the number of envelopes returned following receptacle implementation, and the total weight (lbs) of collected medications between 2018 to 2019.

Results: Delays in installation limit results to secondary endpoints. In the three months post-education, there was a 36% increase in TakeAway envelopes returned (n=99 vs. n=154). The total weights of medications collected from 2018 to 2019 increased by 59% (189.14 vs. 301.08).

Conclusions: Patient and provider education resulted in a positive increase in the volume of medication disposed using available disposal methods.

Objective: Describe how a facility can improve utilization of available medication disposal resources.

Self Assessment Question: Identify 2 types of patient education that could be used to increase appropriate medication disposal.

Video: https://youtu.be/zg40IFw2uYs

12:45pm – 1:00pm P **181 - Follow-up evaluation of opioid safety initiative patients: focus on early adopter outcomes and suicide.** Room A

Presenters: Mary O'Barr

Follow-up evaluation of opioid safety initiative patients: focus on early adopter outcomes and suicide.

Mary Elizabeth O'Barr; Lizmarie Aviles-Gonzalez
BVAM1 Brimingham VA Medical Center

Background: The Department of Veterans Affairs (VA) introduced an Opioid Safety Initiative (OSI) in fiscal year (FY) 2013 to improve opioid safety and appropriate use through utilization of standardized predictive risk models, patient care procedures, and education. OSI implementation has led to a 45% decrease in opioid use within the VA system and a 41% decrease at the Birmingham VA Medical Center (BVAMC).

Methodology: In this arm of a multisite, retrospective chart review, patients (n=83) of the BVAMC who were initially on chronic opioids greater than or equal to 90 MEDD with subsequent opioid discontinuation were evaluated. Patients were excluded if they stopped receiving opioids due to: transfer of care to another VA or outside facility, receiving palliative/hospice care, lost to follow-up, died before discontinuation, or were switched to another opioid. Type of medical management, goal of opioid treatment, reason for taper, MEDD prior to and after taper, concurrent medications and medical conditions, informed consent, withdrawal symptoms and management, VA services utilized, documented plan and speed of taper, type of opioid (long acting versus short acting), most recent urine drug screen, and documentation of risk stratification will be evaluated as potential predictors. Presence of suicidal thoughts, attempts during taper, and incidence of overdose will be also be recorded and used as outcomes. All data was recorded without patient identifiers and maintained confidentially. Logistic regression analyses will be performed to determine whether predictors significantly affected presence or absence of suicidal ideation, attempts, and overdoses.

Results: In Progress

Conclusions: In Progress

Objective: Identify predictors affecting safety and efficacy outcomes of OSI patients with a high (greater than or equal to 90) morphine equivalent daily dose (MEDD) who were subsequently tapered off opioids.

Self Assessment Question: What is one obstacle for determining safety of opioid tapering practices?

12:45pm – 1:00pm D **188 - Immunization adherence in neonatal intensive care units** Room H

Presenters: Mary Palmer

Immunization adherence in neonatal intensive care units

Mary Palmer, J. Brock Harris, Amy P. Holmes, Malinda G. Parman
NHFM1 Novant Health Forsyth Medical Center

Background: The 2019 Centers for Disease Control (CDC) immunization schedule from birth to 15 months recommends a variety of vaccines within the first year of life, specifically at birth, 30 days, 60 days, 4 months, 6 months, and 9 months. Infants born premature do not receive the same amounts of IgG as those that are full-term, resulting in poorer immune systems and an increased susceptibility to infectious diseases. Many studies have demonstrated that preterm infants are capable of achieving protective antibody levels in response to immunization similar to full-term infants, yet many of them do not receive immunizations according to schedule. The purpose of this study was to assess neonatal intensive care unit (NICU) immunization rates and identify reasons behind delays.

Methodology: A total of 1999 patient charts from 6/30/17-6/30/19 were retrospectively reviewed across two community hospitals to determine if vaccines were administered on time per CDC recommendations. A delayed vaccine was defined by subtracting the intended age of each vaccine per the recommended schedule from the age the vaccine was given. Patients were included if they had an admission to the NICU and were excluded if they died or were transferred out of the NICU before 30 days. The primary endpoint was immunization rates among NICU patients at 30 days, 60 days, 4 months, and 9 months. The secondary endpoints were barriers to administration of vaccines in accordance with CDC recommended schedules.

Results: Only 516 patients met inclusion criteria, with a total of 5174 vaccines administered. A total of 1958 vaccines were administered on time, 3075 were administered late, and 141 were administered early. One patient was completely compliant with the CDC immunization schedule. The percent of patients who received their first hepatitis vaccine on time was 1.2%, but of those who did not receive it on time, 90.6% were low birth weight with a hepatitis B negative mother. The primary reasons behind delays were parental deferral or delayed consent. Additional barriers included infant illness at time of immunization, surgery, lack of access to transportation, and manufacturer backorder.

Conclusions: Overall vaccine adherence with CDC immunization schedules was 37.8%. Various barriers have been identified, but education targeting parents and obtaining timely consent may lead to improvement in vaccine adherence. A follow-up study will assess the impact of this education to see if it was successful in improving adherence rates.

Objective: Assess neonatal intensive care unit immunization rates and identify reasons behind delays.

Self Assessment Question: What are evidence-based reasons for delaying a vaccine in a preterm infant?

1:00pm – 1:15pm A **193 - Evaluation of a pharmacy-led medication adherence program targeted to improve Medicare star ratings** Room A

Presenters: Karan Patel

Evaluation of a pharmacy-led medication adherence program targeted to improve Medicare star ratings

Karan Patel; Melissa Pendoley; Urvi Choksi; Kayla Randle
KFHP1 Kaiser Foundation Health Plan of Georgia

Background: Approximately 50% of patients with chronic illnesses are not adherent to their medications, which has been associated with poor health outcomes. The Centers for Medicare and Medicaid Services (CMS) developed star ratings to gauge quality and performance of Medicare insurance plans. This system evaluates plans on several factors including adherence to certain medication classes. In 2017, Kaiser Permanente of Georgia (KPGA) created a pharmacy-led adherence team with pharmacy technicians and pharmacists to identify barriers and increase adherence rates amongst nonadherent Medicare Part D (MPD) members. The purpose of this study is to evaluate the impact of adherence outreach methods employed by the KPGA medication adherence team.

Methodology: This descriptive study reviewed the change in PDC based on the number and method of adherence outreaches by pharmacy technicians and pharmacists to MPD members who were nonadherent to non-insulin diabetes medications (DM), statins, and renin-angiotensin system inhibitors (RAS). Members with at least one adherence outreach between December 31, 2017 and December 31, 2018 were included in the study. Data collected included demographic information, outreach method (text message, telephone, or letter), number of outreaches, and outreaches by technicians versus pharmacists. Descriptive statistics were utilized for data analysis.

Results: For DM agents, there were 446 outreaches on 206 patients with a 0.249 increase in PDC. For RAS agents and statins, there were 1199 and 1570 outreaches on 589 and 778 patients resulting in increases in PDC of 0.216 and 0.226, respectively. Telephone calls plus mailed letters resulted in the highest median increase in PDC at 0.295.

Conclusions: An average of two adherence outreaches per member over 12 months increased adherence between 21.6-24.9% which assisted KPGA in achieving it’s 5-star rating.

Objective: Describe the impact of a pharmacy-led adherence team on medication adherence rates.

Self Assessment Question: What is the goal Proportion of Days Covered set by CMS?

https://vimeo.com/409788050

1:00pm – 1:15pm B **203 - Impact of expanded immunization services on annual influenza vaccination rates within a rural healthcare system** Room K

Presenters: David Pinkerton

Impact of expanded immunization services on annual influenza vaccination rates within a rural healthcare system
David Pinkerton, Ashley Channels, Abigail White, Jason White
CIHC1 Cherokee Indian Hospital

Background: According to the Centers for Disease Control and Prevention, influenza-related complications are amongst the top-10 causes of death in the Native American population. Vaccination is the most effective way to reduce influenza-related morbidity and mortality. The objective of this study was to improve influenza immunization rates within the Cherokee Indian Hospital Authority (CIHA) patient population by increasing the vaccination efforts in the community.

Methodology: A protocol allowing CIHA pharmacist-immunizers to administer the influenza vaccine was proposed to and approved by the CIHA Pharmacy and Therapeutics Committee and the Eastern Band of Cherokee Indians (EBCI) Medical Institutional Review Board. Influenza immunization clinics were organized at various locations within the community. The location of clinics focused on areas that would improve convenience and accessibility for patients. All patients 18 years of age and older that are eligible for vaccines at CIHA were included in the study. The exclusion criteria were patients with previous severe reactions to an influenza vaccine, or a history of Guillain-Barré Syndrome. Prior to vaccination, every patient was screened for safety and eligibility. The primary endpoint was to compare the 2019-2020 influenza vaccination rates to the previous year within the CIHA patient population. Secondary endpoints included comparing the number of confirmed influenza diagnoses between seasons and vaccination rates by age group.

Results: The overall influenza vaccination rate increased from 40% in the 2018-2019 season to 43% in the 2019-2020 season. Vaccinations rates improved for all age groups included in the study. Rapid Influenza Diagnostic Tests with positive results decreased from 723 last season to 471 this season.

Conclusions: Community-based immunization clinics had a positive impact on improving influenza vaccination rates within the CIHA patient population.

Objective: Describe the impact of community-based immunization clinics on annual influenza vaccination rates. Self Assessment Question: What characteristics make community-based immunization clinics an effective strategy for improving influenza vaccination rates?

Presentation Link: https://www.youtube.com/watch?v=_xLBc524RmI

1:00pm – 1:15pm Y **195 - Assessment of the Prevalence of Burnout in Community Pharmacists** Room C

Presenters: Shivali Patel

Assessment of the Prevalence of Burnout in Community Pharmacists

Shivali Patel; Matthew Kelm; Paul Bush; Hui-Jie Lee; Amanda Ball

DUHD1 Duke University Hospital

Background: Assessing community pharmacist burnout and promoting optimal resiliency training is currently a top priority for many professional organizations. The American Pharmacists Association (APhA) is committed to addressing pharmacist burnout and considers pharmacist well-being at the center of the organization's mission. This study aims to identify the prevalence of burnout in community pharmacists.

Methodology: The Maslach Burnout Inventory – Human Services Survey (MBI-HSS) and a work-factors based questionnaire was delivered to an American Pharmacists Association (APhA) listserv of community pharmacists from January 4th to January 18th, 2020. The MBI-HSS evaluates burnout based on feelings of emotional exhaustion, depersonalization, and reduced personal accomplishment. Pharmacist demographics, position characteristics, and pharmacy store characteristics were also collected in the questionnaire. Descriptive statistics were used to analyze the prevalence of burnout and its risk factors.

Results: A total of 412 community pharmacists responded to the survey, of which 411 were included in the final analysis. 74.9% (n = 308) of responding community pharmacists experienced burnout in at least one of the three subscles of the MBI-HSS. 68.9% of community pharmacists experienced burnout due to emotional exhaustion, 50.4% due to depersonalization, and 30.7% due to reduced personal accomplishment. Significant risk factors for burnout include younger age, shorter years of experience, practicing primarily in a chain pharmacy, and a lack of resources for burnout or resiliency.

Conclusions: There is a high degree of burnout seen in community pharmacists.

Objective: Identify risk factors associated with increased burnout in community pharmacists.

Self Assessment Question: Which of the following is a risk factor associated with increased burnout in community pharmacists?

A. Increased age

B. Staffing alone for >50% of your shift

C. 1:1 pharmacist to technician ratio

D. Scheduled or mandatory meal breaks

1:00pm – 1:15pm Y **201 - Assessing the impact of community pharmacists on diabetes knowledge, hemoglobin A1c, and cholesterol in prediabetic and diabetic patients** Room I

Presenters: Kevin Philippart

Assessing the impact of community pharmacists on diabetes knowledge, hemoglobin A1c, and cholesterol in prediabetic and diabetic patients

Kevin Philippart, Joshua Kinsey, Sharon Sherrer

MUAG1 Mercer University College of Pharmacy

Background: Recent studies by the Center for Disease Control estimate that 30.4 million people in the United States were living with diabetes and 84.1 million were living at an increased risk for type 2 diabetes (prediabetes) in 2015. Multiple studies demonstrate patients with diabetes-self management education had a decrease in risk of all-cause mortality and exhibited a significant improvement in hemoglobin A1c and cholesterol compared to the usual standard of care. The investigators of this study wish to evaluate the community pharmacist's impact of patient education on patient knowledge retention, hemoglobin A1c, lipid profile, and BMI using a validated knowledge assessment tool.

Methodology: This is a prospective cohort study of diabetic and prediabetic patients at an independent pharmacy. This study will integrate aspects of knowledge retention in patients currently diagnosed or at risk for diabetes. Once patients meet inclusion criteria, patients will sign the informed consent document and be evaluated using the Diabetes Knowledge Test (DKT2) for baseline knowledge. The patient will be educated using a brief standardized education tool. Once the patient is educated, the patient will be weighed, measured, and the BMI will be calculated. Once the initial measurements are completed, the patient's hemoglobin A1c and Cholesterol (TC, HDL, LDL, and TG) will be obtained using point of care (POC) testing devices. The DKT2 will be used again to assess their post-education knowledge. At months 3, 6, and 9 the patient will repeat the DKT2, POC testing, BMI, and waist circumference measurements. Throughout the 9 months, adherence to statin therapy and therapy changes in antihyperglycemic agents will be documented.

Results: Preliminary Results Pending

Conclusions: Plan for expansion for the foreseeable future

Objective: Identify community pharmacists' impact on diabetes knowledge retention and overall patient outcomes.

Self Assessment Question: What is a validated tool that can assess a patient's knowledge of diabetes?

https://youtu.be/s2tXuwiI0kc

1:00pm – 1:15pm R **196 - Evaluation of Causes of Failures to Extubate in Patients that Pass Spontaneous Awakening and Breathing Trials** Room D

Presenters: Sneha Patel

Evaluation of Causes of Failures to Extubate in Patients that Pass Spontaneous Awakening and Breathing Trials

Sneha Patel, Joanna L Stollings, Jon D Casey, Todd W Rice, Matthew W Semler

VUMC1 Vanderbilt University Medical Center

Background: While the traditional assumption has been that patients who pass a spontaneous awakening trial (SAT) and spontaneous breathing trial (SBT) will be extubated, many patients who pass an SAT and SBT are not extubated. The purpose of this study was to determine if patients who pass a SAT safety screen, SAT, SBT safety screen, and SBT but are not extubated are (1) more likely to have received sedative medications on the day prior to SAT and SBT attempt and (2) are more likely to have a neurological indication for mechanical ventilation.

Methodology: We performed a retrospective, observational cohort study of mechanically ventilated patients admitted to the Medical Intensive Care Unit. In this cohort of patients, pharmacy personnel collected daily information on the reason for SAT safety screen, SAT, SBT safety screen, and SBT failure. The primary outcome was extubation among all patients who passed an SBT.

Results: In progress

Conclusions: In progress

Objective: Identify reasons why patients who pass an SAT and SBT are not extubated

Self Assessment Question: Which of the following is NOT a contraindication for a SAT safety screen according to the Wake Up and Breathe protocol? A. Active seizure, B. Paralytic, C.Agitation, D. Vasopressor use

1:00pm – 1:15pm R **200 - Impact of a Pharmacist Driven Procalcitonin Protocol on Antimicrobial Stewardship** Room H

Presenters: Thu-Kim Phan

Impact of a Pharmacist Driven Procalcitonin Protocol on Antimicrobial Stewardship

Thu-Kim Phan, Kathy Pollitzer, Kerry Ward
MCCG1 Medical Center of Central Georgia

Background: Procalcitonin (PCT) assays can be used to indicate bacterial load and bacteremia before blood culture confirmations. Studies show that obtaining serial procalcitonin levels can be used to guide antimicrobial therapy in patients with sepsis and/or lower respiratory tract infections. The objective of this study is to assess the impact of pharmacists following a pilot procalcitonin protocol on length of antimicrobial therapy (LOAT) in intensive care unit (ICU) patients with sepsis and/or lower respiratory tract infections.

Methodology: Pharmacists were in-serviced on a pilot procalcitonin protocol in September 2019. The interventional period from October 2019 to December 2019 included patients who were 18 years or older, admitted to the ICU, started on antibiotics within 24 hours of a PCT level, diagnosed with presumed sepsis and/or lower respiratory tract infections and PCT levels followed by pharmacists. Clinical pharmacists monitored daily PCT levels through MedMined alerts. Patients were separated into two groups; one group included patients who had a pharmacist ordered PCT level and one group who did not.

Results: Seventy-seven patients were retrospectively analyzed; fifty-one met the inclusion criteria. Forty-three patients (84.3%) were ordered a second PCT level by a pharmacist and eight patients (15.6%) were not. Patients with a second PCT level demonstrated an average LOAT of 10.1 days compared with patients with one PCT level who had an average LOAT of 3.4 days.

Conclusions: Following a pilot procalcitonin protocol, there was a longer average length of antimicrobial therapy in patients with a second PCT level. Ultimately, a larger study is needed to confirm these results.

Objective: To assess how a pharmacist driven procalcitonin protocol impacted average length of antimicrobial therapy in patients with sepsis and/or lower respiratory tract infections.

Self Assessment Question: Can pharmacist interventions through the use of procalcitonin levels impact length of antimicrobial therapy?

https://www.youtube.com/watch?v=tKvT_tr4Hxw&t

1:00pm – 1:15pm I **198 - Impact of a clinical decision support tool on Staphylococcus aureus bacteremia outcomes at a community health system** Room F

Presenters: Spencer Peh

Impact of a clinical decision support tool on Staphylococcus aureus bacteremia outcomes at a community health system

Keng Hee Peh, Kiet Nguyen, Lacie McKamey, Sarah Green
NHFM1 Novant Health Forsyth Medical Center

Background: ID consults are pertinent in improving SAB outcomes. Upon positive SAB detection from a rapid blood culture identification (BCID) panel or traditional blood culture, a best practice alert (BPA) is triggered for clinicians to request an ID consult. The overall goal of this study is to evaluate adherence to SAB quality indicators post-implementation of a BPA at a multisite community health system.

Methodology: This was a retrospective quasi-experimental study approved by the local institutional review board. Adult patients with a positive SAB result across all hospitals were included in the study. The primary endpoint is the composite outcome of 30-day mortality, persistent SAB infection (≥7 days), or 30-day recurrent SAB.

Results: Three hundred and twenty two patients were included in the analysis. The primary composite endpoint was met for 23/121 (19.0%) and 47/201 (23.4%) of SAB occurrences pre- and post-BPA implementation, respectively ($p = 0.434$). The primary composite endpoint was met in 6/27 (22.2%) and 64/295 (21.7%) of cases when ID consult was or was not consulted, respectively ($p = 1.0$). If ID was consulted, there were statistically significant increases in adherence to 72-hour blood culture follow up (55.6% and 89.8%, $p < 0.001$), echocardiogram (77.8% and 98.0%, $p < 0.001$), appropriate antibiotics (74.1% and 95.6%, $p < 0.001$) and duration (68.2% and 97.5%, $p < 0.001$).

Conclusions: Our study showed increased adherence to SAB quality indicators when ID was consulted. Limitations include this being a retrospective study with a small sample size in the non-ID consult group. We conclude that there is potential utility in implementation of a BPA complementary to the BCID panel.

Objective: Describe the impact of clinical decision support tools and infectious disease (ID) consults on Staphylococcus aureus bacteremia (SAB) outcomes

Self Assessment Question: Which of the following SAB quality indicators were significantly improved with ID consults?

1:00pm – 1:15pm | **202 - Implementation of a Pharmacist Led Culture and Susceptibility Review System In Urgent Care and Outpatient Settings** Room J

Presenters: Kristen Pierce

Implementation of a Pharmacist Led Culture and Susceptibility Review System In Urgent Care and Outpatient Settings

Kristen Pierce, Kim Clarke, Marci Swanson, Deborah Hobbs
CVVA1 Carl Vinson VA Medical Center

Background: Prevalence of increasing antibiotic resistance is an urgent threat to the public's health. By 2050, it is projected that drug-resistant conditions could cause roughly 300 million deaths and could be as disastrous to the economy as the 2008 global financial crisis. Ensuring appropriateness of antibiotic therapy through antimicrobial stewardship can help combat this significant public health issue. The purpose of this project is to implement a pharmacist-managed culture review service to decrease and ultimately prevent inappropriate use of antibiotics. This service will intervene in the cases of mismatched antibiotic/bacteria combinations to decrease physician and nursing interruptions, improve patient safety, and improve general prescribing practices to reduce occurrence of future antibiotic resistance.

Methodology: Patients requiring changes in antibiotic therapy after culture and susceptibility results were identified through a computer dashboard. Once results were available, antibiotics were assessed for appropriateness. If the isolated organism was not susceptible to the empiric antibiotic, the pharmacist intervened by adjusting the regimen, counseling the patient, and documenting the intervention electronically with the provider tagged for notification. Follow-up phone calls were completed to assess for side effects and answer questions from patients. If the patient was unable to be reached after 3 attempts, a certified letter was sent through mail. All methods were completed through a care coordination agreement between providers and pharmacists.

Results: As of February 2019, research is ongoing. A total of 672 resulted cultures were assessed by the pharmacist with 8 changes made to antimicrobial regimens. Upon follow-up, none of these patients were still symptomatic after completing modified antimicrobial therapy. Further interventions are still pending.

Conclusions: In progress

Objective: Discuss the impact of pharmacist-led modifications to antimicrobial regimens.

Self Assessment Question: What challenges are associated with pharmacist-led antimicrobial changes in the VA?

LINK TO PRESENTATION:
https://www.youtube.com/watch?v=ue7IuPCx8dI

1:00pm – 1:15pm I **204 - Financial comparison of a self-pay population discharged to receive dalbavancin versus standard of care for ABSSSI** Room L

Presenters: Adam Pizzuti

Financial comparison of a self-pay population discharged to receive dalbavancin versus standard of care for ABSSSI

Adam Pizzuti, Murray EY, Gaul DA, Wagner JL, Bland CM, Jones BM

SJCH1 St. Joseph's/Candler Health System

Background: In the past, our facility showed that treating acute bacterial skin and skin structure infections (ABSSSI) patients with dalbavancin was associated with a decreased length of stay (LOS) and 30-day readmission rates, not focusing specifically on the self-pay population. This study aimed to determine cost differences in treating ABSSSI in self-pay inpatients with dalbavancin compared to standard of care (SOC).

Methodology: This retrospective cohort compared self-pay adult patients discharged to receive dalbavancin at an outpatient infusion center with SOC self-pay patients that received intravenous antibiotics inpatient for ABSSSI from February 3, 2016 through August 5, 2019. Exclusion criteria included being pregnant, infections caused exclusively by gram-negative bacteria or fungi, or ICD-10 codes not consistent with ABSSSI. Primary outcome was direct cost of hospital stay. Secondary outcomes included LOS, 30-day readmission rates, adverse events (AE), and indirect hospital costs.

Results: A total of 27 dalbavancin and 263 SOC patients were included. An increase in total direct cost per patient in the dalbavancin group compared to SOC was found ($5,892 vs $4,010, p = 0.049). Of the dalbavancin patients, 12/27 had vial replacement performed. A decrease in the median LOS in the dalbavancin group was found (3 days vs 4 days, p = 0.479). There were lower 30-day readmission rates in the dalbavancin group (3.7% vs 7.2%). AE and indirect hospital costs were similar (11.1% vs 14.8% and $3,700 vs $3,647, respectively).

Objective: Identify cost differences in a self-pay patient population receiving outpatient dalbavancin treatment compared to inpatient standard of care.

Self Assessment Question: Which patients could receive dalbavancin to reduce length of stay?

LINK TO PRESENTATION: https://youtu.be/EVKuaEunaWY

1:00pm – 1:15pm O **197 - Determining the Impact of Early verse Late Tocilizumab Use in Patients Receiving Immune Effector Cell (IEC) Therapy with Cytokine Release Syndrome** Room E

Presenters: Rachel Peaytt

Determining the Impact of Early verse Late Tocilizumab Use in Patients Receiving Immune Effector Cell (IEC) Therapy with Cytokine Release Syndrome

Rachel Peaytt, Laura Beth Parsons, Darby Siler, Rachel Matthews, Belinda Li

TSCM1 TriStar Centennial Medical Center

Background: Chimeric Antigen Receptor (CAR) T-cell therapies can lead to potentially life-threatening toxicities, including cytokine release syndrome (CRS) and neurotoxicity. Anti-IL-6 therapy, such as tocilizumab, has become the standard treatment for CRS due to its ability to reverse symptoms without compromising CAR-T cell efficacy. Corticosteroids are reserved for refractory or severe CRS because of lymphotoxicity and concern for the attenuating antitumor activity of CAR-T cells. The optimal time to administer anti-IL-6 therapy for treatment is not known. The purpose of this study is to compare early versus late tocilizumab administration to determine the overall effect on patient outcomes and healthcare resource utilization.

Methodology: Patients who received tocilizumab for treatment of CRS secondary to CAR-T cell infusion were evaluated. Objectives of this study were to determine if early tocilizumab administration to treat CRS secondary to CAR-T cell therapy decreases steroid use, ICU admission, and inpatient mortality compared with late tocilizumab (primary composite endpoint). Early tocilizumab administration is defined as first dose of tocilizumab administered < 24 hours first fever and late tocilizumab is defined as first dose of tocilizumab administered > 24 hours after onset of first fever.

Results: The primary composite outcome occurred more frequently in the early tocilizumab group compared with the late tocilizumab group. There was no statistically significant difference in vasopressor use, length of hospital stay, or occurrence of neurotoxicity between the groups.

Conclusions: Early administration of tocilizumab did not decrease the primary outcome, which may suggest that tocilizumab was administered earlier in patients with more severe and rapid progression of CRS. More studies are needed to further determine the optimal time for administration of tocilizumab for CRS secondary CAR-T cell therapy.

Objective: Describe the possible benefit of early tocilizumab administration for treatment of CRS secondary to CAR-T cell infusion

Self Assessment Question: Why is it important to decrease corticosteroid utilization in patient’s receiving CAR-T cell therapy?

1:00pm – 1:15pm T **194 - Assessment of the Effect of Pharmacist-Led Interventions on 30-Day Readmission Rates in Chronic Obstructive Pulmonary Disease Patients** Room B

Presenters: Namita Patel

Assessment of the Effect of Pharmacist-Led Interventions on 30-Day Readmission Rates in Chronic Obstructive Pulmonary Disease Patients

Namita Patel;NaaDede Badger-Plange;Disa Patel;Chelsea Moran;Abigail Shell
PIED1 Piedmont Hospital

Background: Chronic obstructive pulmonary disease (COPD) is the third leading cause of hospital readmissions in the United States. By understanding the barriers to improved clinical outcomes and finding interventions that help prevent the breakdowns, hospitals have created and implemented plans to reduce COPD readmission rates. The purpose of this study is to determine the impact of pharmacist-led interventions on 30-day readmission rates in COPD patients.

Methodology: Patients admitted for a COPD exacerbation at Piedmont Atlanta Hospital from November 2018-January 2019 were included in the retrospective group, and patients admitted between November 2019 - February 2020 were in the prospective group. Forty patients were included in each group. Patients greater than 18 years of age with an admitting diagnosis of COPD were included while those who were pregnant or in hospice were excluded. The pharmacist-led interventions in the prospective phase included performing medication reconciliations, discharge counseling and follow-up phone calls. The primary outcome was comparison of 30-day readmission rates between the two cohorts. The secondary outcomes were the number of changes in the medications lists after a medication reconciliation, the ability of patients to afford their medications after discharge, and the rate of patient follow-up with their pulmonologist.

Results: In the retrospective group, 15 patients were readmitted within 30 days with an average length of stay of 4.5 days.

Conclusions: In progress

Objective: To determine if pharmacist-led interventions can lead to a reduction in 30-day readmission rates in chronic obstructive pulmonary disease (COPD) patients

Self Assessment Question: Do pharmacist-led interventions reduce 30 day readmission rates for COPD patients?

Link to video SERC presentation: https://vimeo.com/user113300969/review/410586358/317c91d78f

1:00pm – 1:15pm 1 **199 - Comparison of Post-Transplant Hospital Readmission Rates in Non-Obese vs. Obese Kidney Transplant Recipients** Room G

Presenters: Kevin Phan

Comparison of Post-Transplant Hospital Readmission Rates in Non-Obese vs. Obese Kidney Transplant Recipients

Kevin Phan; Kwame Asare; Caroline B. Gatzke
STWH1 St. Thomas West Hospital

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

Methodology: This was 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. Adult patients who received a kidney transplant between 12/01/16 and 12/01/18 were enrolled and followed through 12/01/19. The study excluded patients with a kidney transplant performed in combination with any other organ during the study period. A subgroup analysis on the obesity groups (underweight, normal, overweight, obese, and morbidly obese) was also performed.

Results: This IRB-approved study included 117 patients. Non-obese patients (BMI < 30) had a 56.5% readmission rate within one year of kidney transplantation compared to obese patients (BMI ≥ 30) at 61.8%. Delayed graft function (DGF) occurred in 33.9% of non-obese and 45.5% of obese patients. The median transplant and readmission length of stay were the same between the two groups at 4 days and 8 days, respectively. Readmission rates varied between subgroups but there was an increasing trend in DGF with increasing BMI. Hospital length of stay varied between subgroups as well.

Conclusions: This study showed no statistically significant differences in hospital readmission rate, incidence of DGF, or hospital length of stay between non-obese and obese kidney transplant recipients.

Objective: Describe how post-transplant hospital readmission rates compare in non-obese versus obese kidney transplant recipients.

Self Assessment Question: How does obesity affect post-transplant hospital readmission rates in kidney transplant recipients?

https://youtube.com/watch?v=u91cuhUC05I

1:15pm – 1:30pm B **210 - Comparison of evidence-based blood pressure goals in patients with type 2 diabetes mellitus between pharmacists and other providers in primary care** Room F

Presenters: Madeline Pryor

Comparison of evidence-based blood pressure goals in patients with type 2 diabetes mellitus between pharmacists and other providers in primary care

Madeline Pryor, Victoria Germinario, Rebekah Krupski
NHFM1 Novant Health Forsyth Medical Center

Video URL: https://youtu.be/oEZRfM39yOw

Background: Compare current practice of blood pressure (BP) management in type 2 diabetes mellitus (T2DM) between pharmacists and other providers within primary care clinics.

Methodology: This was a multicenter, retrospective chart review in three multidisciplinary primary care clinics utilizing descriptive and statistical analyses as appropriate. Eligible patients included those with a diagnosis of hypertension, T2DM, and at least two office visits during July 2018 to July 2019. Primary outcome of this study was to evaluate BP control according to ADA guidelines at the second visit.

Results: This study included 284 patients, with 134 followed by pharmacists. The primary outcome was greater in the pharmacist-managed group (60 %) compared to the non-pharmacist-managed group (58%) (p =0.8278). Although all patients had an established BP goal, only the pharmacist-managed group documented a guideline to support BP goals (4.5% vs 0%). Of the patients with an out-of-range BP, 87% in the pharmacist group and 63% in non-pharmacist group received an intervention (p=0.0003). ACE-I or ARB therapy was utilized in 84% of patients with albuminuria in the pharmacist group and 76% in the non-pharmacist group (p=0.16).

Conclusions: Although there was no statistically significant difference, pharmacists had a higher percentage of patients controlled according to ADA guidelines, documented guideline selection for BP goals, and the addition of an ACE-I or ARB in the presence of albuminuria. There was a statistically significant greater percentage of interventions made for out-of-range BP in the pharmacist group. Next steps include developing a tool and providing education for providers to use during the BP goal-setting process at Novant Health primary care offices.

Objective: Identify the importance of pharmacists' involvement in patients with T2DM and hypertension to decrease macrovascular complications.

Self Assessment Question: What would be an appropriate BP goal for an active 45 year old patient with T2DM and an ASCVD risk score of 19%?

1:15pm – 1:30pm R **205 - 4-Factor Prothrombin Complex Concentrate versus Alternative Usual Care in Patients with Intracranial Hemorrhage Receiving Oral Factor Xa Inhibitors** Room A

Presenters: Stuart Pope

4-Factor Prothrombin Complex Concentrate versus Alternative Care in Patients with Intracranial Hemorrhage Receiving Oral Factor Xa Inhibitors

Stuart Pope; Christine Kempton; William Asbury
Emory University Hospital

Background: Direct oral anticoagulants (DOACs), including Factor Xa Inhibitors (FXaIs), have become the preferred anticoagulant option for several disease states. However, prior to May 2018, there was no specific reversal agent available to manage significant bleeds, including intracranial hemorrhage. The recent approval of coagulation factor Xa (recombinant), inactivated-zhzo offers a specific reversal agent for FXaIs, but it may be cost-prohibitive to many institutions and has not yet been compared to usual care, including 4F-PCC. Thus, there is need to evaluate current approaches to manage bleeds associated with FXaIs. We aim to compare the efficacy and safety of 4F-PCC versus alternative usual care strategies in patients with intracranial hemorrhage requiring oral FXaI reversal.

Methodology: A retrospective cohort review that includes adult patients who were admitted to an Emory Healthcare hospital with an intracranial bleed and were taking either apixaban or rivaroxaban. The primary objective for this study is to compare the percentage of patients who achieved effective hemostasis 24 hours after 4F-PCC or alternative care administration. Secondary objectives include occurrence of any arterial or venous thromboembolism, antithrombotic agent restarted at discharge, length of stay, and mortality.

Results: After adjusted for baseline characteristics, there were no differences between groups for primary or secondary outcomes. The median dose of 4F-PCC administered was 2164 units and the median weight-based dose was 26 units/kg.

Conclusions: Ultimately, we did not find a difference in our primary or secondary outcomes, but larger studies are needed to determine if there is a difference between 4F-PCC and alternative care strategies for ICH management and if there are select patients who would benefit from a stepwise approach to reversal strategies.

Objective: Describe the efficacy and safety results for the management of oral factor Xa-related intracranial bleeds using either 4-factor prothrombin complex concentrate or alternative care.

Self Assessment Question: In patients who present with oral factor Xa-related intracranial hemorrhage, should 4F-PCC be used for their management?

https://youtu.be/XrUYKBd6T8g

1:15pm – 1:30pm R **206 - Prophylactic enoxaparin dosing regimen based on BMI in extreme obesity** Room B

Presenters: Carra Powell

Prophylactic enoxaparin dosing regimen based on BMI in extreme obesity
Carra L. Powell, Rachel S. Settle, Blair W. Nist
BMCS Baptist Medical Center South
Background: Enoxaparin is standard therapy for venous thromboembolism (VTE) prophylaxis in hospitalized patients. Literature suggests the pharmacokinetics of enoxaparin are altered in morbidly obese patients and higher doses of enoxaparin may be needed to achieve therapeutic anti-factor Xa levels. Therefore, standard enoxaparin doses of 30 mg or 40 mg daily may be suboptimal as VTE prophylaxis and may increase their risk of VTE. The purpose of this study is to implement and evaluate a twice-daily dosing protocol for enoxaparin prophylaxis in patients with a body mass index (BMI) greater than or equal to 40 kg/m2.
Methodology: Patients were included if they were 18 years of age or older, initiated on the regimen in an intensive care unit (ICU), and had a BMI greater than or equal to 40 kg/m2. Patients were excluded if they were pregnant, had a serum creatinine greater than 1.6 mg/dL, or had any contraindication to use of enoxaparin. Participants were assigned to a prophylactic dose of enoxaparin based on BMI. Patients with a BMI of 40.0 kg/m2 to 50.0 kg/m2 received 40 mg subcutaneous twice daily, and patients with a BMI greater than 50.0 kg/m2 received 60 mg subcutaneous twice daily. Peak anti-factor Xa levels were measured four to six hours after the third or fourth dose; the dose was increased or decreased by 10 mg for subtherapeutic and supratherapeutic levels, respectively. Data collection included anti-factor Xa levels, incidences of bleeding, and incidences of venous thromboembolism.
Results: In Progress
Conclusions: In Progress
Objective: Discuss the efficacy and safety of a twice-daily prophylactic enoxaparin dosing regimen based on BMI in extreme obesity.
Self Assessment Question: What percentage of patients with extreme obesity initially achieved therapeutic anti-Xa levels using enoxaparin as a twice-daily dosing regimen based on BMI?

https://youtu.be/Yb8gqYZ5RxM

1:15pm – 1:30pm R **211 - SYSTEM WIDE REVIEW OF SNAKEBITES IN GEORGIA** Room G

Presenters: Kela Pugh

SYSTEM WIDE REVIEW OF SNAKEBITES IN GEORGIA
Kela Pugh, Matthew McAllister
PCRM1 Piedmont Columbus Regional Midtown
Background: Limited data is available regarding snakebites in Georgia. The purpose of this study is to evaluate and report the descriptive epidemiologic profile of snakebites treated within the Piedmont Healthcare System. The results of this research will be valuable in both the hospital and community settings for treatment and awareness.
Methodology: An IRB approved retrospective chart review was conducted of all patients presenting to any Piedmont Healthcare facility with a snakebite diagnosis. All patients presenting to Piedmont Columbus Regional Midtown from January 1, 2015 to December 31, 2019 with a diagnosis of snakebite were included in the study and their data was extracted from the two electronic medical records utilized during that time frame (Epic® and Meditech®). Patients presenting to all other Piedmont facilities with a diagnosis of snakebite were included from the time of Epic® implementation or their emergency department opening through December 31, 2019. A report was generated to identify all patients with a snakebite diagnosis within the designated time frame. Charts were reviewed to confirm the diagnosis and extract the following information: patient demographics, relevant labs (WBC, platelets, INR, and fibrinogen), snakebite information (date and time of occurrence, snake type, anatomic location of bite, and circumstances), treatment (antivenom used, time to first dose, total doses, and cost), complications, and length of stay. The primary outcome evaluated was the incidence of snakebites. The secondary outcomes included severity, length of hospital stay, and cost of treatment.
Results: In Progress
Conclusions: In Progress
Objective: Evaluate and describe the epidemiologic profile of snakebites in Georgia.
Self Assessment Question: What is the most common type of snakebite in Georgia?

1:15pm – 1:30pm | **207 - Incidence of Vancomycin-Induced Nephrotoxicity through comparison of steady-state trough levels vs AUC/MIC ratio** Room C

Presenters: Ryan Powell

Incidence of Vancomycin-Induced Nephrotoxicity through comparison of steady-state trough levels vs AUC/MIC ratio

Ryan Powell, Melanie Hyte, Haden Bunn & Joshua Settle
BMCS Baptist Medical Center South

Background: Vancomycin is the standard of care for treatment of methicillin-resistant Staphylococcus aureus (MRSA) infections. The 2009 vancomycin guidelines state vancomycin steady-state serum trough concentrations of 15 to 20 ug/mL correspond to an area under the concentration-time curve to minimum inhibitory concentration (AUC/MIC) ratio greater than 400 ug-hr/mL and should effectively treat most MRSA infections, provided the MIC is less than l mg/mL. Recent studies have shown vancomycin trough concentrations greater than 15 ug/mL increase the risk of vancomycin-induced nephrotoxicity (VIN). In 2019, new consensus guidelines recommend vancomycin dosing strategies directly target AUC/MIC ratios between 400 and 600 ug-hr/mL instead of steady-state serum trough concentrations in order to maximize efficacy and minimize the risk of VIN.

Methodology: To evaluate the feasibility of a new dosing strategy at Baptist Medical Center South, a prospective, single-center trial was initiated to target a therapeutic trough range of 15 to 20 ug/mL (control group) compared to an AUC/MIC ratio of 400 to 600 ug-hr/mL (treatment group). The primary outcome evaluated the rate of VIN defined as either a rise in serum creatinine (SCr) greater than 0.5 mg/dL within 48 hours of starting therapy or a 50% increase in SCr from baseline within 7 days. The secondary outcome evaluated the potential risk of nephrotoxicity by assessing the incidence of AUC/MIC ratio levels greater than 600 ug-hr/mL between both study groups.

Results: In Progress

Conclusions: In Progress

Objective: Identify the incidence of VIN in patients receiving vancomycin dosed either using vancomycin steady-state serum trough concentrations or AUC/MIC ratios.

Self Assessment Question: Is a vancomycin trough target of 15 to 20 ug/mL associated with greater VIN compared to AUC/MIC ratio targets of 400 to 600 ug-hr/mL?

Youtube Link to Oral Presentation: https://youtu.be/Hw-CTN4HGK8

1:15pm – 1:30pm | **214 - Development of a Clinical Risk Factor Scoring Model for Extended-Spectrum Beta-Lactamase Infections in the Intensive Care Unit** Room J

Presenters: Ashley Rizzo

Development of a Clinical Risk Factor Scoring Model for Extended-Spectrum Beta-Lactamase Infections in the Intensive Care Unit

Ashley Rizzo, Benjamin Albrecht, Marybeth Sexton, Erin Bendock, Yi-An Ko, Qi Meng

EUHA1 Emory University Hospital

Background: Some bacteria can produce chemical substances, extended-spectrum beta-lactamases (ESBLs), which break down commonly used antibiotics and leave healthcare professionals struggling to treat deadly infections. Identification of patients most at risk for infections with these types of pathogens can help target broad-spectrum empiric antibiotic therapy to the appropriate patients while preventing the spread of additional resistant organisms through unnecessary antibiotic coverage.

Methodology: This study was a single-center retrospective chart review for all intensive care unit (ICU) patients from April 2017-January 2018 with positive culture results for gram-negative organisms that received antibiotics for at least 48 hours. Data will be collected on potential risk factors such as co-morbid conditions, organ dysfunction, hospital admissions, immunosuppression, and others. The primary outcome is the development of a risk-scoring model to identify patients at risk for ESBL-producing organism by comparing ESBL- and non-ESBL-infection populations.

Results: Of 237 total patients were reviewed, 73 patients were included in the case group and 130 patients were included in the control group. More respiratory infections were seen within the cases (51%) and more urinary infections with the controls (45%). AmpC-producing organisms were isolated more frequently in the case group. In univariate analysis, antibiotic use within 90 days and end-stage liver disease were both associated with risk of ESBL infection as well as broad spectrum antibiotic therapy and longer duration of antibiotic treatment (>20 days). Using multivariate logistic regression, central line presence, end-stage liver disease, antibiotic use within 90 days, and antibiotic use >10 days were included in the risk-scoring model which had a ROC-AUC of 0.7 indicating a fair fit.

Conclusions: Antibiotic use within 90 days, duration of antibiotics >10 days, end-stage liver disease, and the presence of a central line were all associated with increased risk of ESBL infection.

Objective: Identify specific risk factors for patients within the ICU who are more likely to develop gram-negative infections as a result of ESBL-producing organisms.

Self Assessment Question: Which risk factors were found to be most strongly associated with infection as a result of ESBL-producing gram-negative organisms in critically ill patients?

Link to Presentation: https://www.youtube.com/watch?v=IunMrfjTkWM

1:15pm – 1:30pm I **215 - AN EVALUATION OF PHARMACY RESIDENT RESPONSIBILITIES FOR AN IN-HOUSE ON CALL PROGRAM WITH RESPECT TO INFECTIOUS DISEASE RELATED ACTIVITIES** Room K

Presenters: Kristen Robinson

AN EVALUATION OF PHARMACY RESIDENT RESPONSIBILITIES FOR AN IN-HOUSE ON CALL PROGRAM WITH RESPECT TO INFECTIOUS DISEASE RELATED ACTIVITIES

Kristen Robinson, E. Drwiega, M. Knauss, J. Wong, J. Kriengkauykiat, S. Rab
GMHA1 Grady Memorial Hospital

Background: To assess the total volume and time spent on infectious disease (ID) activities documented in an electronic call log.

Methodology: This was a retrospective review which evaluated activities entered into the electronic call log by the on-call pharmacy resident at Grady Health System (GHS) between July 1st, 2017 through June 30th, 2019. Data was obtained from an online electronic spreadsheet developed by the pharmacy department where the on-call resident documented activities. Call log activities without a pre-designated call category or a date entered by the resident were excluded. Activities were designated as either ID related or non-ID related. The ID related activities were further categorized as either process or clinical. Data was analyzed using descriptive statistics and Chi-square tests with SPSS for Windows, version 11.

Results: Over the study period, 14,501 calls from the call log were reviewed, and 13,966 of those calls were included. Of the 13,966 included calls, 6,238 (44.8%) were designated as ID related. Of the ID related activities, the majority were designated as clinical, n =5,998. There were 4,520 (72%) ID related activities, which required 10-30 minutes to complete. This is in comparison to the 3,403 (45.4%) non-ID related calls, the majority of which required < 10 minutes to complete ($p < 0.001$). The largest proportion of ID related activities received were related to pharmacokinetic consults (PK) and drug level evaluations.

Conclusions: There was a larger volume of non-ID related activities in comparison to ID related activities; however, ID related activities took a longer time to complete. The majority of the ID related activities were clinical and pertained to PK consults.

Objective: Assess the role of an on-call pharmacy resident on ID-related activities in a large academic medical center

Self Assessment Question: How do pharmacy residents in an in-house on-call program fit into the pharmacy staffing model and contribute to ID practice at GHS?

1:15pm – 1:30pm N **213 - Safety and efficacy of alternating 23.4% saline with equi-osmolar sodium acetate in neurocritical care patients** Room I

Presenters: Jessica Ringler

Safety and efficacy of alternating 23.4% saline with equi-osmolar sodium acetate in neurocritical care patients

Jessica Ringler, Katleen Chester, Ofer Sadan
GMHN2 Grady Memorial Hospital (Neurology)

Background: Hypertonic sodium chloride (HTS) is used to manage cerebral edema. Recent data suggests hyperchloremia from saline administration is associated with increased risk for renal dysfunction. To offset the risk of hyperchloremia, institutions have incorporated the use of sodium acetate with HTS to create buffered hypertonic solutions. To minimize sterile IV bags and 23.4% HTS use during a critical shortage, the Neuroscience Center at GHS converted to utilizing alternating 23.4% HTS and equi-osmolar sodium acetate boluses every 6 hours to a serum sodium goal.

Methodology: This retrospective chart review includes all patients admitted to the NCC unit that received scheduled 23.4% saline with or without alternating equi-osmolar sodium acetate from January 1, 2014 to June 30, 2019. Patients that received the alternating regimen were compared to those that received 23.4% saline alone to achieve a pre-determined sodium goal. The primary outcome was the incidence of AKI per KDIGO classification.

Results: Eighty patients received 23.4% HTS alone and 36 received alternating therapy. Ischemic stroke was the primary injury in approximately half of cases; however, there was a greater proportion of subarachnoid hemorrhages in the alternating cohort. Other demographics were similar between treatment groups. The primary outcome occurred in 37.5% of patients in the 23.4% HTS group and 36% of the patients who received alternating therapy ($p = 0.76$). Patients who received 23.4% HTS therapy alone experienced a larger increase in serum chloride from baseline.

Conclusions: There is no difference in incidence of AKI between treatment groups. This suggests alternating solutions do not influence AKI incidence; however, the preliminary data is underpowered to confirm this finding.

Objective: Describe the impact alternating hyperosmolar therapy has on renal function in neurocritical care (NCC) patients.

Self Assessment Question: In addition to hyperchloremia, what other factors may contribute to renal dysfunction in patients receiving hypertonic solutions?

1:15pm – 1:30pm T **209 - Impact of pharmacists' transitional home visits on hospital utilization** Room E

Presenters: Arkeia Pruitt

Impact of Pharmacists' Transitional Home Visits on Hospital Utilization

Arkeia Pruitt, Mia Yang, Molly Hinely, Sarah Griffin, Rachel Zimmer
WFBH1 Wake Forest Baptist Health

Background: Describe the impact of pharmacist involvement on a transitional home visit team to reduce readmissions and emergency department visits at an academic medical center.
Methodology: Eligible participants were patients who received a transitional home visit after a hospitalization or emergency department visit by the Wake Forest House Call Program from July 1, 2019 to December 31, 2019. The change in the cumulative 30-day pre and post number of hospitalizations and emergency department visits of patients seen by a pharmacist and an advanced practice provider (APP) were compared to those seen by an APP alone. The types of pharmacist interventions and the rate of primary care provider (PCP) follow-up were also evaluated.
Results: 16 patients were included in the pharmacist-provider group and 57 patients were included in the provider only group. 68.8% of patients in he pharmacist-provider group had a decrease in total hospitalizations after a transitional home visit versus 84.2% of patients in the provider only group (p value 0.2555). 62.5% of patients in the pharmacist-provider group followed up with a PCP after a transitional home visit versus 57.9% of patients in the provider only group (p value 0.7408). Medication education was the most prevalent pharmacist intervention (81.3%) followed by medication changes (43.8%), medication access (43.8%).
Conclusions: There was no difference in hospital utilization of patients seen by a collaborative provider-pharmacist team for a transtional home visit compared to patients seen by a provider only.
Objective: Explain pharmacists' role on a transitional home visit team and the potential impact on hospital readmission or emergency department visits.
Self Assessment Question: What interventions can pharmacists make during transitional home visits?

Video link: https://youtu.be/7IaSU5cphoQ

1:15pm – 1:30pm 1 **212 - Pharmacist Initiated Hepatitis B Vaccinations In Liver Transplant Recipients** Room H

Presenters: Alia Reid

Pharmacist Initiated Hepatitis B Vaccinations In Liver Transplant Recipients

Alia Reid, Sarah Todd, Madeline Morrison, Andrew Adams
EUHT2 Emory University Hospital (Transplant)

Background: The risk of developing hepatitis B after liver transplantation remains high in nonimmune patients receiving a hepatitis B core antibody positive (HBcAb+) allograft, but this is mitigated by lifelong antiviral prophylaxis or vaccination and seroconversion. In March 2019, our center implemented a pilot study enabling pharmacists to screen patients undergoing liver transplant evaluation and HBcAb+ liver transplant recipients for Heplisav-B® vaccination eligibility and order Heplisav-B® for administration. The purpose of this study was to determine if pharmacist-initiated Heplisav-B® vaccination improves vaccination rates in pre- and post-liver transplant patients.
Methodology: This single-center, retrospective review included patients undergoing liver transplant evaluation and HBcAb+ liver transplant recipients seen in clinic between March 2019 and October 2019. Patients with active hepatitis B or C, HIV, immunity to hepatitis B, or those transplanted before 2013 were excluded. Hepatitis B vaccination rates after implementation of pharmacist-driven vaccination management were compared to a historical control.
Results: After implementing pharmacist-driven Heplisav-B® vaccination management, 82 patients were potential candidates: 75 undergoing liver transplant evaluation and 7 HBcAb+ liver transplant recipients. Prior to the pilot, 32% of patients undergoing liver transplant evaluation and 2% of patients who received a HBcAb+ liver were vaccinated. After implementing the pilot, vaccination rates increased to 48% (n=36) of patients undergoing liver transplant evaluation and 43% (n=3) of HBcAb+ liver transplant recipients ($P<0.05$). A pharmacist ordered Heplisav-B® for 85% of patients undergoing liver transplant evaluation and 86% of HBcAb+ liver transplant recipients. Overall, 56% of ordered Heplisav-B® vaccinations were administered.
Conclusions: Pharmacist-driven vaccination management improved vaccination rates in patients undergoing liver transplant evaluation and those that received a HBcAb+ liver. There is potential for higher vaccination rates, as approximately half the vaccines ordered were administered.
Objective: Describe the impact of pharmacist-initiated Heplisav-B® vaccination on vaccination rates in pre- and post-liver transplant patients.
Self Assessment Question: Does pharmacist-initiated Heplisav-B® vaccination improve vaccination rates?

1:15pm – 1:30pm 1 **216 - Impact of the transplant clinical pharmacist in an outpatient transplant clinic** Room L

Presenters: Olivia Roe

Impact of the transplant clinical pharmacist in an outpatient transplant clinic
Olivia C. Roe, Sara Gattis, Denise J. Lo, Ronald F. Parsons, Sarah B. Todd
EUHA1 Emory University Hospital **Background/Purpose:** Evaluate the impact of transplant clinical pharmacists' interventions in a multi-organ post-transplant clinic.
Methodology: Patients discharged from their transplant admission between August 1, 2016 and August 1, 2019 were reviewed. Any patient seen in the transplant clinic within 30 days of transplant discharge was eligible for inclusion. Patients were placed in one of two cohorts based on the presence or absence of a transplant pharmacist outpatient note within 30 days of transplant discharge. Patients in each cohort were matched 1:1 by organ type. The primary outcome of this study is to determine the probability of any all-cause hospital encounter 90 days post-transplant discharge. Secondary endpoints include incidence of all-cause hospital encounters, rate of organ rejection, hypertension and blood glucose control, renal dosing management, and all-cause mortality.

Results: During the study period, a total of 600 patients were evaluated with 300 included in each cohort. The breakdown of organ type per cohort is as follows: 187 kidney, 95 liver, 11 liver/kidney, 6 kidney/pancreas, and 1 heart/kidney. Two hundred twenty-four patients (74.7%) in the intervention cohort achieved the primary outcome in comparison to 85 patients (28.3%) in the control cohort ($p<0.001$). Appropriate renal dosing was higher in the intervention cohort at 30, 60 and 90 days ($p=0.032$, $p=0.009$, $p=0.002$).
Conclusions: Transplant patients who visit with a clinical pharmacist in the outpatient setting have significantly higher hospital encounter rates. Clinical pharmacist involvement in the outpatient transplant setting is associated with a significantly higher rate of appropriate renal dosing of medications.

Presentation Objective: Identify the value of outpatient pharmacist presence within a comprehensive multi-organ model.
Self-Assessment: What clinical outcomes are evaluated in a transplant pharmacy visit in an outpatient clinic? Select all that apply: hypertension, diabetes mellitus, renal dosing, organ rejection

Video link: https://youtu.be/tpwy6Wh4xiQ

1:30pm – 1:45pm B **219 - Evaluation of a Capstone Course Re-design on Student Clinical Skills Acquisition** Room C

Presenters: Kimberly Sassenrath

Evaluation of a Capstone Course Re-design on Student Clinical Skills Acquisition
Kimberly Sassenrath, Beth Phillips, Russ Palmer, Katie Smith
UGAA1 University of Georgia College of Pharmacy
Background: In 2018, a new capstone course was implemented to develop practical patient work-up skills utilizing the Pharmacists' Patient Care Process. Based on student evaluation feedback, the course underwent re-design for 2019. The purpose of this study was to analyze the impact of course redesign on student clinical skill development.
Methodology: The 2018 and 2019 final exam rubrics were analyzed for pre-determined clinical skills. Logistic regression was utilized to assess the impact of the course re-design while controlling for confounders that may impact student performance.
Results: A total of 265 rubrics were analyzed and 255 included in the analysis. There was no significant difference in final grades for students in 2019 compared to 2018 (66% vs 63% $p=0.1307$). Students in 2019 were found to have higher odds in demonstrating: identifying, drug of choice, and monitoring for primary problem (OR 8.481 [95% CI 1.023 to 70.298], OR 2.909 [95% CI 1.336 to 6.330], OR 3.023 [95% CI 1.601 to 5.708] respectively), identifying all secondary problems (OR 2.103 [95% CI 1.061 to 4.165]), and drug-disease interaction identification and management (OR 2.775 [95% CI 1.613 to 4.775] and OR 1.851 [95% CI 1.098 to 3.121]). Students had lower odds of identifying the correct dose of drug for the primary problem (OR 0.187 [95% CI 0.105 to 0.33]) and INR monitoring (OR 0.473 [95% CI 0.278 to 0.805]).

Conclusions: While exam scores were similar between the two classes, there were six areas in which students had statistical improvement in clinical skills. This study demonstrated that test scores may not be fully reflective of skill development, and course structure changes in 2019 had a positive impact on student learning.

Objective: Evaluate and quantitate the impact of course structure change on student's clinical skills acquisition
Self Assessment Question: What are ways to evaluate student learning other than test scores?

1:30pm – 1:45pm Y **218 - Barriers to receiving influenza and pneumococcal vaccines for patients living with HIV**

Presenters: Mariam Saba Room B

Barriers to receiving influenza and pneumococcal vaccines for patients living with HIV

Mariam Saba, Joshua Kinsey, Katina Richmond
MUAG1 Mercer University College of Pharmacy

Objective: To identify patient specific barriers associated with receiving influenza and pneumococcal vaccines among HIV-positive adults who are receiving anti-retroviral therapy (ART) to treat human immunodeficiency virus (HIV) from selected community-based specialty pharmacies in Georgia.

Background: Patients living with HIV are at high risk for morbidity and mortality associated with influenza and pneumonia.Currently, there is limited data on identifying barriers that this patient population may encounter when attempting to receive vaccinations. One way to increase vaccination rates for patients living with HIV is to first identify challenges they face when receiving specific types of vaccines. It is speculated that sub-optimal vaccination rates are multi-factorial. Some potential concerns identified through previous research includes the efficacy, immune response, and lack of knowledge of recommended vaccines among patients living with HIV.

Discussing the importance and understanding potential barriers to receiving annual influenza and recommended pneumococcal vaccines in HIV-infected adults can contribute to the public health initiative for reducing vaccine preventable illnesses.

Methodology: This study is an IRB-approved cross-sectional telephonic survey. Select chain specialty community-based pharmacy sites which dispense ART for HIV treatment were identified for patient outreach. Patient outreach was conducted from December, 2019 to April, 2020. In addition to routine patient care management calls, patients were asked to partake in a telephonic survey regarding routine influenza and pneumococcal vaccines. The survey consists of two parts; demographic information and ten questions formulated based on previous research. The Georgia Registry of Immunization Transaction and Services (GRITS) was accessed directly after conducting each survey in order to verify vaccination records for patient responses regarding whether they have received the specified vaccines. Included participants were English speaking, HIV-positive adult patients (age ≥ 18) who are enrolled in the selected pharmacies' patient connect care management program for ART dispensed from community-based specialty pharmacies in Georgia.

Results: A majority of participants did not report having any barriers to receiving the influenza or pneumococcal vaccines (35% and 39% respectively). Other reported barriers to receiving the influenza vaccine were not knowing where to get the vaccine, perceptions of getting the flu from the vaccine, and/or not thinking there is a need to receive the vaccine (Figure 1). 32% of reported barriers to receiving either pneumococcal vaccines were reported as not receiving physician's recommendation (Figure 2.)
Data found that for a majority of participants, vaccination status has not been documented in GRITS.

Participants reported ways in which pharmacists can have an impact on vaccination rates including providing additional education on the importance of these vaccines, adding more information in prescription packages, educating on the side effects, providing the vaccines at no cost, and reminding/calling the patient about recommended vaccines on a routine basis.

Conclusions: Understanding potential barriers associated with receiving these vaccines is important for identifying and creating effective community-based pharmacy interventions to futher increase immunization rates and vaccine education in this patient population.

Self Assessment Question: What challenges do patients living with human immunodeficiency virus (HIV) have when receiving influenza and pneumonia vaccines and how can pharmacists make an impact based on the reported barriers?

Virtual Presentation Link: https://youtu.be/f2dR6lArk58

1:30pm – 1:45pm R **223 - Impact of Time to 4-Factor Prothrombin Complex Concentrate Administration on Hematoma Expansion and Mortality in Intracranial Hemorrhage** Room G

Presenters: Michael Scott

Impact of Time to 4-Factor Prothrombin Complex Concentrate Administration on Hematoma Expansion and Mortality in Intracranial Hemorrhage

M. Scott, J. Schultheis, H. Lee, S. Kram, J. Sigmon, K. Dombrowski

DUHD1 Duke University Hospital

Background: The purpose of this study is to evaluate the association between time to 4F-PCC administration with hematoma expansion or death. Intracranial hemorrhage (ICH) is associated with significant morbidity and mortality. Hematoma expansion is a predictor of poor prognosis and is the only potential therapeutic target that may be responsive to treatment. Patients receiving anticoagulation with spontaneous ICH have a higher likelihood of hematoma expansion; therefore, consensus guidelines recommend immediate anticoagulant reversal.

Methodology: This retrospective cohort study included adult patients anticoagulated with warfarin or a direct oral anticoagulant (DOAC; apixaban, rivaroxaban, or edoxaban) who received 4F-PCC for acute ICH within Duke University Health System between July 2013 and October 2019. Patients with repeat 4F-PCC dosing two or more hours following the initial dose, secondary ICH due to vascular malformation, brain tumor, hemorrhagic conversion of cerebral infarction, bleeding disorders (hemophilia A or B, sickle cell anemia, inherited or acquired Von Willebrand disease), bleeding locations associated with poor prognosis, INR (International Normalized Ratio) less than two on warfarin, hematoma evacuation prior to follow-up CT scan, or placed on comfort care within 48 hours of ICH identification were excluded. The primary exposure was time to administration of 4F-PCC and the primary endpoint was hematoma expansion or death within 48 hours of baseline CT scan. Secondary endpoints included in-hospital mortality, length of ICU stay (days), length of mechanical ventilation, length of hospital stay (days), and discharge location. Outcomes were compared between patients taking warfarin versus DOACs.

Results: In progress.

Conclusions: In progress.

Objective: Describe the association between time to 4-Factor Prothrombin Complex Concentrate (4F-PCC) administration and hematoma expansion/death.

Self Assessment Question: Which of the following is a predictor of poor prognosis in ICH that may be responsive to 4F-PCC treatment?

A. Heart rate

B. Blood pressure

C. Hemoglobin

D. Hematoma expansion

1:30pm – 1:45pm R **228 - EFFECTS OF AN INTRAVENOUS MAGNESIUM SHORTAGE ON CRITICALLY ILL PATIENTS**

Presenters: Courtney Skinner Room L

Effects of an Intravenous Magnesium Sulfate Shortage on Critically Ill Patients
Courtney Skinner, Alex Ewing, Kimberly Clark
GHSG1 Greenville Health System
Background: Within our institution, an adult intensive care unit (ICU) electrolyte replacement order set is utilized for magnesium (Mg) replacement in critically ill patients with serum Mg < 2 mg/dL. Historically, intravenous (IV) Mg sulfate has been utilized; however, a recent shortage of IV Mg sulfate required using oral (PO) Mg oxide as an alternative.
Methodology: A single-center retrospective chart review was conducted on patients with an active adult ICU electrolyte replacement order set admitted to our institution both prior to and during the IV Mg sulfate shortage. The primary outcome was time to goal serum Mg level. Secondary outcomes included number of doses administered to achieve goal serum Mg level, change in serum Mg level per dose, incidence of adverse events (e.g., seizures, arrhythmias), diarrhea, C. difficile infection (CDI) testing, length of stay, and mortality.
Results: Ninety-nine patients were included in the IRB-approved study, with 49 in the IV group and 50 in the PO group. Serum Mg level prompting initial order set activation was similar between the groups (1.7 vs. 1.6, P = 0.726). Goal serum Mg level was achieved in 86% (42/49) of patients in the IV group and 56% (28/50) in the PO group (P = 0.001). At 24 hours, 86% (36/42) in the IV group vs. 71% (20/28) in the PO group had reached goal.. No significant differences in adverse events, but the PO group had an increased incidence of diarrhea (P=0.015) and CDI testing (P=0.001).
Conclusions: Fewer patients in the PO group achieved goal serum Mg level. Additionally, PO Mg oxide was associated with increased incidence of diarrhea and CDI testing.
Objective: Identify the impact of an IV Mg sulfate shortage on critically ill patients.
Self Assessment: Utilizing PO Mg oxide for replacement in the setting of an IV Mg sulfate shortage has an effect on critically ill patients.

https://youtu.be/Y0LU-vrh5is

1:30pm – 1:45pm I **221 - Impact of a Viral Respiratory Panel on the Duration of Antibiotic Therapy in Influenza Positive Patients** Room E

Presenters: Kayla Scheps

Impact of a Viral Respiratory Panel on the Duration of Antibiotic Therapy in Influenza Positive Patients
Kayla Scheps, Brooke Tullos, Adam Wiss
STWH1 St. Thomas West Hospital
Background: 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.
Methodology: This study was an IRB-approved, retrospective chart review of adult patients admitted to Saint Thomas West Hospital who tested positive for influenza using a VRP from October 1, 2018 to May 31, 2019 or a RIDT from 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. Data were analyzed 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 outcomes included 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).
Conclusions: A VRP compared to a RIDT did not decrease the duration of antibiotic therapy in patients who tested positive for the influenza virus.
Objective: Determine if the utilization of a VRP compared to a RIDT decreased the duration of antibiotic therapy in patients who test positive for the influenza virus.
Self Assessment Question: Has the utilization of the VRP compared to a RIDT decreased the duration of antibiotics in the patients who test positive for the influenza virus?

https://youtu.be/aoe57eX9M58

1:30pm – 1:45pm | I

224 - Antimicrobial optimization and cost savings associated with use of blood culture rapid multiplex PCR Room H

Presenters: Taylor Servais

Antimicrobial optimization and cost savings associated with use of blood culture rapid multiplex PCR
Taylor Kaye Servais, Lloyd Sarbacker, Matthew Timmons, Evan McDonald
BSSF1 Bon Secours St. Francis Downtown
Background: Traditional methods of pathogen identification and susceptibility take 24-48 hours post gram stain. Multiplex PCR is a lab instrument that can identify certain pathogens in approximately 2 hours post gram stain result, providing the opportunity for rapid antimicrobial optimization. The objective of this study is to evaluate the impact of the multiplex PCR system on antimicrobial utilization, improved patient care, cost savings with early identification, and receptiveness to pharmacy interventions based on PCR results.
Methodology: The electronic medical record system was used to complete a retrospective chart review of patients who received a multiplex PCR report. The following data was collected: patient demographics, renal function, admitting diagnosis, change in antimicrobial therapy, total days of antimicrobial treatment, length of hospital stay, and comparison of culture result to multiplex PCR result. Documentation in the electronic medical record and the time to antimicrobial change in respect to the multiplex PCR result; was used to determine if the multiplex PCR result led to a pharmacist recommendation for optimization of antimicrobial therapy. Acceptance of pharmacists' intervention recommendation by the physician was reviewed. All data will be recorded without patient identifiers and maintained confidentially. The data collected was analyzed to determine the impact of the multiplex PCR on rapid optimization of antimicrobial therapy, cost savings, and receptiveness to pharmacy recommendations.
Results: In progress
Conclusions: In progress
Objective: At the conclusion of my presentation, the participant will be able to describe the impact of rapid multiplex PCR on antimicrobial optimization and cost savings.
Self Assessment Question: Does the use of blood culture rapid multiplex PCR impact early antimicrobial optimization and cost savings?

1:30pm – 1:45pm | I

225 - Impact of Optimal Antibiotic Therapy for Pneumonia on 30-day Readmissions Room I

Presenters: Jessica Sherrod

Impact of Optimal Antibiotic Therapy for Pneumonia on 30-day Readmissions
Jessica Sherrod;Stephanie Grimes;Brad Crane;Danielle Yates;Nikki Sowards
BMHT1 Blount Memorial Hospital
Background: Thirty-day readmission rates for Medicare patients have a direct impact on reimbursement rates. Blount Memorial Hospital (BMH) has a higher than desired readmission rate for patients with the diagnosis of pneumonia. There is currently minimal data available to determine the cause. The purpose of this study is to evaluate if there is a correlation between optimal antibiotic therapies for pneumonia treatment and 30-day readmission rates.
Methodology: This study is an IRB-approved, retrospective chart review of patients admitted to BMH with a primary discharge diagnosis of pneumonia between May 1, 2019-June 30, 2019. Patients were excluded if they were less than 18 years old, discharged to another hospital, expired, left against medical advice, receiving long term antibiotics, receiving antibiotics for indications other than pneumonia, have bronchiectasis, on hospice or comfort care, or are immunocompromised. The primary objective is to evaluate if there is a correlation between optimal antibiotic treatment for pneumonia and 30-day readmissions. Secondary objectives include causes for readmissions, reasons for suboptimal antibiotic therapy, and Clostridioides difficile rates.
Results: In Progress
Conclusions: In Progress
Objective: Identify if there is a correlation between optimal use of antibiotics for the treatment of pneumonia and 30-day readmissions
Self Assessment Question: What are categories of suboptimal antibiotic use for pneumonia?
A. Drug
B. Dose
C. Duration
D. All of the above

Correct Answer: D

1:30pm – 1:45pm O **217 - EVALUATION OF RAPID DRUG DESENSITIZATIONS OF ONCOLOGY TREATMENT REGIMENS IN AN OUTPATIENT INFUSION CENTER** Room A

Presenters: Deana Rogers

EVALUATION OF RAPID DRUG DESENSITIZATIONS OF ONCOLOGY TREATMENT REGIMENS IN AN OUTPATIENT INFUSION CENTER

Deana Rogers, Sajia Kotwal, Alexandria Balkcom
Emory Decatur Hospital – Decatur, Georgia

Background/Purpose: Hypersensitivity reactions, including anaphylaxis, are possible with systemic chemotherapy and immunotherapy agents. When reactions occur, a dilemma presents in which the current regimen must be discontinued and alternative agents are initiated. The alternative agents in oncology treatment regimens are often not as efficacious and may have more toxic side effects. Rapid drug desensitization (RDD) allows patients to continue their optimal treatment regimen. The purpose of this study is to determine the safety and appropriateness of the RDD process.
Methodology: This single-center, retrospective chart review included all patients receiving desensitization to any chemotherapy or immunotherapy agents in the outpatient infusion center between December 1, 2013 – February 29, 2020. The primary endpoint was the percentage of patients who tolerated RDD. The secondary endpoints were the percentage of patients who completed a guideline recommended first line regimen, most common agents for desensitization, and cost of RDD compared to alternative agents.
Results: 87 patients were examined for this study. 96.6% of patients were able to tolerate RDD and receive their full therapeutic dose. 89.7% of patients received RDD to a guideline recommended first line agent. Carboplatin, oxaliplatin, and paclitaxel were the most common agents utilized for desensitization. The cost of desensitization was comparable to alternative agents.
Conclusions: Rapid drug desensitization is a safe and appropriate option for oncology patients which allows them to stay on a first line treatment regimen rather than switching to an alternative agent.

Presentation Objective: Identify oncology patients that may benefit from RDD

Self-Assessment: Is RDD a safe treatment option for all oncology patients?

PRESENTATION: https://www.youtube.com/watch?v=Nid6Ne7QoHg&feature=youtu.be

1:30pm – 1:45pm O **226 - Correlation of engraftment and time from melphalan administration to stem cell infusion**
Presenters: Kaci Shuman Room J

Correlation of engraftment and time from melphalan administration to stem cell infusion
Kaci Shuman, Brandi Anders, LeAnne Kennedy, Shannon Palmer, Ryan Shaw
WFBH1 Wake Forest Baptist Health
Background: For eligible patients with newly diagnosed multiple myeloma (MM), autologous hematopoietic cell transplantation (aHCT) is considered the standard of care as consolidative therapy. In this patient population, high-dose melphalan is recommended as the preparative regimen of choice to be given prior to aHCT. While there are specific recommendations regarding melphalan's use and dosing, the timing of administration in relation to the infusion of stem cells is not as clearly defined. The timing of melphalan administration has varied across the literature with many studies administering the drug 48 hours (day -2) or 24 hours (day -1) prior to the infusion of stem cells. The policy at Wake Forest Baptist Health (WFBH) is to administer stem cells at least 24 hours following melphalan administration, however other institutions are infusing stem cells within a shorter time frame. The primary objective of this study is to determine if administering stem cells less than 24 hours from melphalan infusion impacts time to engraftment following aHCT.
Methodology: This multi-center, retrospective cohort study analyzes time to engraftment in patients who received stem cells 24 hours post-melphalan administration compared to those who received stem cells within a shorter time frame (12-24 hours). Eligible participants include adult MM patients who underwent initial aHCT between January 2016 and September 2019, were mobilized with granulocyte-colony stimulating factors with or without plerixafor, and received melphalan as preparative therapy.
Results: In progress
Conclusions: In progress
Objective: Explain the appropriate timing of stem cell infusion in relation to melphalan administration for autologous hematopoietic cell transplantation.
Self Assessment Question: True/False: Infusing stem cells within 12-24 hours after melphalan administration does not affect time to engraftment.
https://youtu.be/2PbUglNGQNI

1:30pm – 1:45pm O **227 - Assessment of Bleeding Risk with Concomitant Vascular Endothelial Growth Factor Receptor Tyrosine Kinase Inhibitor Treatment and Anticoagulation** Room K
Presenters: Akhilesh Sivakumar

Retrospective Study of Bleeding Risk with Concomitant VEGF TKI Treatment and Anticoagulation
Akhilesh Sivakumar, Tyler Beardslee, Sarah Caulfield, Mehmet Bilen
EUHA1 Emory University Hospital
Background: Patients with solid tumor malignancies are at increased risk for both venous thromboembolism (VTE) and bleeding, which in turn complicates anticoagulant (AC) therapy. An added complexity is the side effect profile of agents used to treat these cancers, namely the vascular endothelial growth factor receptor tyrosine kinase inhibitors (VEGF TKIs), which are associated with both thrombotic and hemorrhagic adverse effects. Though bleeding is a complication of both ACs and VEGF TKIs, there are a lack of data evaluating bleeding risk in patients taking these medications concomitantly. The purpose of this study was to evaluate whether patients taking concurrent VEGF TKI and therapeutic AC were at higher risk for bleeding compared to patients taking a VEGF TKI alone.
Methods: This was a single-center, retrospective chart review of patients who underwent treatment with a VEGF TKI with or without AC between December 1, 2005 and July 31, 2019. Relevant data points collected included any major and/or minor bleeding events, associated risk factors such as concomitant use of medications known to increase bleeding risk, and VTE episodes. The primary outcome of this study was to compare rates of major bleeding between patients taking concurrent VEGF TKI and therapeutic AC compared to those taking a VEGF TKI alone.
Results: A total of 184 patients and 74 patients were included in the TKI alone and TKI + AC groups, respectively. In the TKI alone group, 6/184 (3.3%) patients experienced a major bleeding event as compared to 5/74 (6.8%) of patients in the TKI + AC group (p=0.304). However, composite major and minor bleeding event rates between patients treated with a TKI and TKI + AC were 22/184 (12%) and 19/74 (25.7%), respectively (p=0.006), though this was driven by minor bleeding events.
Conclusions: Concurrent treatment with a VEGF TKI and therapeutic anticoagulant increases the risk for bleeding events.
Objective: Evaluate the safety of concomitant AC and VEGF TKI use in patients with solid tumor malignancies.
Self Assessment Question: Are RCC patients who take concurrent AC and VEGF TKI predisposed to a higher bleeding risk compared to those who take a VEGF TKI alone?

1:30pm – 1:45pm P **222 - Using a clinical informatics tool to promote patient care and safety when prescribing opioids** Room F

Presenters: Eric Schumann

Using a clinical informatics tool to promote patient care and safety when prescribing opioids
Eric Schumann, Sharon Castle, Kevin Brittain
JVAL2 Ralph H. Johnson VA Medical Center (Administration and Leadership)
Background: In the wake of more than 42,000 opioid-related deaths in 2016, the Department of Health and Human Services declared a public health emergency. Experts agree that stopping this crisis requires all healthcare providers to be engaged. The Ralph H. Johnson VA Medical Center (RHJVAMC) implemented a clinical informatics tool in October 2018 to mitigate risks associated with opioid prescribing by presenting patient-specific risk information prior to prescribing and guiding providers through ordering and review of this data. The purpose of this project is to evaluate the use and impact of the clinical informatics tool on patient safety metrics (state prescription drug monitoring and urine drug screening), and to engage providers on those findings.
Methodology: This is a retrospective medical record review and prospective quality improvement project to evaluate a clinical informatics tool. This project is taking place at RHJVAMC using local data from October 2017 to May 2020. Patients eligible for inclusion are those receiving an opioid prescription, other than oral buprenorphine. A cohort of primary care providers that prescribed opioids on at least 200 occasions in fiscal year 2019 was identified. A composite of metrics evaluating each provider's use of the clinical informatics tool was created. The cohort will receive an individual compliance report highlighting the items of the composite for fiscal year 2019 between November 2019 and January 2020; thereafter, the cohort will receive a compliance report on a monthly basis, starting in January 2020 and ending in May 2020. The primary outcome of this project will be the overall change in the cohort's composite during the months of December through May. Secondary endpoints include the individual components of the composite.
Results: In Progress
Conclusions: In Progress
Objective: Evaluate the efficacy of the clinical informatics tool and compliance reports on patient safety metrics.
Self Assessment Question: Which states require quarterly prescription drug monitoring when prescribing chronic schedule II opioids?

1:30pm – 1:45pm 1 **220 - Risk Factors for Supra- and Sub- Therapeutic Tacrolimus Levels Immediately after Kidney Transplantation** Room D

Presenters: Riley Scalzo

Risk Factors for Supra- and Sub- Therapeutic Tacrolimus Levels Immediately after Kidney Transplantation
R. Scalzo, J. Byrns, J. Gommer, H-J. Lee, E. Poehlein, & M. Harris
DUHD1 Duke University Hospital
Background: Tacrolimus is an immunosuppressive agent commonly used in renal transplant recipients. At Duke University Hospital (DUH), tacrolimus is initiated on the day of surgery at a weight-based dose of 0.1 mg/kg/day. Clinicians closely monitor trough levels throughout patients' therapy, as evidence has shown that sub-therapeutic levels are associated with an increased incidence of organ graft failure. Supra-therapeutic levels can lead to harmful adverse events such as acute kidney injury, tremors, and seizures. Despite this, it is estimated that less than 50% of renal transplant recipients at DUH achieve a therapeutic tacrolimus level at first steady-state. Several studies have suggested that certain patient-specific characteristics may predispose patients to sub- or supra-therapeutic tacrolimus levels. Therefore, dose individualization based on these characteristics may help patients achieve therapeutic levels sooner. We performed an exploratory study to identify patient characteristics that may serve as risk factors for sub- or supra-therapeutic tacrolimus levels.
Methodology: This retrospective, single-center study analyzed risk factors associated with non-therapeutic tacrolimus levels 2 days after renal transplantation. To be included, patients must have been 18 years or older at the time of transplantation, had their operation at DUH, and received the weight-based dose of tacrolimus. Recipients who underwent a dual organ transplant, received the sublingual, intravenous, or suspension formulation of tacrolimus, were taking concomitant CYP 3A4 inhibiting or inducing medications, or had a tacrolimus level drawn more than 150 minutes before their next dose were excluded. Data was collected through the United Network for Organ Sharing's (UNOS) electronic platform, UNet, and retrospective chart review and reports run through Epic Maestro Care.
Results: In Progress
Conclusions: In Progress
Objective: Identify which patient-specific characteristics are associated with supra- and/or sub-therapeutic tacrolimus levels.
Self Assessment Question: Which patient-specific characteristics are associated with supra- and/or sub-therapeutic tacrolimus levels?

1:45pm – 2:00pm B **230 - Evaluation of a pharmacist led diabetes education course on health system insurance beneficiaries with uncontrolled Type 2 Diabetes Mellitus** Room B

Presenters: Ashley Smith

Evaluation of a Pharmacist Led Diabetes Education Course on Health System Insurance Beneficiaries with Uncontrolled Type 2 Diabetes Mellitus

Ashley Smith, Emily Ghassemi, Autumn Mittleider
CFVM Cape Fear Valley Medical Center

Background: With diabetes costs being one of the largest health expenditures for employers, this study aimed to assess the change in diabetes knowledge of insurance beneficiaries after a pharmacist led diabetes education program.

Methodology: Health system employees, spouses, and dependents age 18 years and older enrolled in the company health insurance and Accountable Care Organization (ACO), were recruited to participate in a pharmacist-led, four class series of diabetes education classes using the Merck Conversation Maps. Participants were instructed to monitor blood glucose, diet, and nutrition throughout the course duration. The Diabetes Knowledge Test was distributed to all participants as a pre-and post- education survey. The primary end-point was change in diabetes knowledge of class participants prior to and after completion of the four classes.

Results: Forty-three patients expressed interest, fifteen enrolled in classes, six were excluded, and three were lost to follow-up. Three participants met inclusion criteria per protocol and three additional patients meet all criteria other than completing the classes every other week. The average pre-education score per protocol was 63.8%, not per protocol 79.7%, and average post-education score per protocol was 78.3%, not per protocol 95.7%. The range of test score improvements ranged from -4.4 to 34.8%.

Conclusions: Though unable to make statistical conclusions, a positive trend of increased knowledge was seen post-education. Expansion of the program is needed moving forward.

Objective: Recognize the importance of diabetes education classes for health system employees with uncontrolled diabetes.

Self Assessment Question: In which ways can a pharmacist add value to diabetes education classes?

https://vimeo.com/409898806

1:45pm – 2:00pm B **233 - Evaluation of Medication Therapy Management (MTM) Interventions by Clinical Pharmacists after Implementation of an Electronic Tool** Room E

Presenters: Luna Soufi

Evaluation of Medication Therapy Management (MTM) Interventions by Clinical Pharmacists after Implementation of an Electronic Tool

Authors and co-authors: Luna Soufi, Nadia Hason, Jasmine Peterson
Kaiser Foundation Health Plan of Georgia

Background: Polypharmacy in the elderly may contribute to a higher risk of adverse drug events (ADEs) such falls, fractures, mental impairment, and hospitalization. Centers for Medicare and Medicaid Services (CMS) mandate health benefit plans to improve health outcomes for Medicare beneficiaries through implementation of medication therapy management (MTM) services. MTM are composed of a once yearly comprehensive medication review (CMR) and a quarterly targeted medication review (TMR) for select Medicare beneficiaries. Clinical pharmacists conduct MTM services and collaborate with other healthcare providers to develop and achieve patient specific optimal goals of medication therapy. During the fall of 2018, an electronic tool called the MTM Smart Form was created to standardize data collection and demonstrate the value of clinical pharmacists through MTM interventions

Methodology: This cross-sectional study includes KPGA Medicare Part D (MPD) members who completed a CMR between January 1, 2019 to December 31, 2019. Members who only received a TMR were excluded. The primary endpoint was to determine the number and type of pharmacist interventions identified during CMRs before and after implementation of the MTM Smart Form. The secondary endpoint was to evaluate the method of intervention implementation (per protocol or recommendation to the provider). The tertiary endpoint was to determine the total number of medication changes
Results: A total of 1,247 MPD members completed a CMR. Pharmacists completed 1,973 MTM interventions. Of these interventions, 847 were per protocol execution and 629 were recommendations to the provider. This resulted into a total of 518 medication changes. The most common types of intervention were needs additional therapy, needs additional monitoring, and adherence/cost

Conclusions: The most common intervention identified prior to the implementation of the MTM smart form was unnecessary therapy, needs additional therapy, and needs additional monitoring. Our study identified that through implementation of the MTM smart form our ambulatory care clinical pharmacists were able to identify different interventions with the most commonly reported being needs additional therapy, needs additional monitoring, and adherence or cost. In addition the MTM form allows for a standardized process that will continue to expand pharmacists role in identifying interventions.

Objective: Determine the number and type of pharmacist interventions documented before and after implementation of the MTM Smart Form at Kaiser Permanente Georgia (KPGA)

Self Assessment Question: How can pharmacists reduce the risk of ADEs in individuals 65 years and older during MTM interventions

https://vimeo.com/410664796

1:45pm – 2:00pm B **235 - Impact of having a clinical pharmacist practitioner (CPP) located in a family medicine clinic on the quality of care in behavioral health patients** Room G

Presenters: Wintana Stefanos

Impact of having a clinical pharmacist practitioner (CPP) located in a family medicine clinic on the quality of care in behavioral health patients

Wintana Stefanos; Chue Black

NHFM1 Novant Health Forsyth Medical Center

Presentation URL: https://youtu.be/MNrO-KR5U-w

Background: Primary care settings are becoming a gateway for many individuals with behavioral health needs through an integrated behavioral health (IBH) care services model. However, Clinical psychiatric pharmacists have not been historically utilized in this role.

Methodology: This research project is a retrospective chart review. 165 patients that were referred to the CPP from July 1, 2018 through July 1, 2019 were analyzed. Identification of patient population was done through a University of Washington AIMS registry. The primary outcomes of the study are change in Patient Health Questionnaire 9 (PHQ 9), change in Generalized Anxiety Disorder 7 item scale (Gad-7), and 50% reduction and abstinence rates in smoking. Analysis of the primary and secondary endpoints was done using descriptive statistics.

Results: 165 patients meeting inclusion and exclusion criteria were included in the IRB-approved study. 85 patients had depression screening completed, 59 patients had anxiety assessment completed and 48 patients were managed for tobacco treatment only. The results of the study showed a 49% decrease in the average PHQ-9 and 44% decrease in the average GAD-7 scores after CPP intervention. In addition, 33% of patients referred for tobacco treatment abstained from smoking.

Conclusions: Having a psychiatric clinical pharmacist in a primary care setting greatly improves the quality of care for mental health patients and can be used to justify the growing role of pharmacists in the ambulatory care space.

Objective: Impact of having a psychiatric CPP located in a family medicine clinic on quality, access and cost of behavioral health treatment and outcomes.

Self Assessment Question: What is one area in which an ambulatory care pharmacist can be utilized to increase access and quality of care for patients?

1:45pm – 2:00pm R **232 - Continuous diluted vasopressin infusion compared to intermittent bolus dosing for central diabetes insipidus in critically-ill adults** Room D

Presenters: Hilary Smith

Continuous diluted vasopressin infusion compared to intermittent bolus dosing for central diabetes insipidus in critically-ill adults

Hilary Smith; Eric Shaw; Stephanie Lesslie

MHUM1 Memorial Health University Medical Center

Background: Vasopressin is preferred in the treatment of CDI due to its short duration of action (6 hours) and ability for titration. While a theoretical benefit of continuous infusion exists, there is a paucity of literature evaluating this practice compared to intermittent bolus dosing. To our knowledge, this will be the first study evaluating the effectiveness of continuous vasopressin infusion to intermittent bolus dosing in the management of CDI in critically-ill adults.

Methodology: This was a single center, retrospective, IRB-approved study. All adult patients with a diagnosis of CDI that received at least 6 hours of vasopressin continuous infusion were matched to patients who received at least 6 hours of vasopressin bolus dosing from July 1st, 2015 to December 31st, 2019. Patients were matched by baseline characteristics and etiology of CDI. The primary outcome was average time to urine output goal (<250 mL/hr). Secondary outcomes were average time to urine specific gravity goal (>1.007), ICU length of stay, ICU mortality and percentage of time within urine output goal.

Results: 32 patients were included (16 patients in each group). The average time to UOP goal was 1.6 hours in bolus group and 5 hours in the continuous infusion group which was statistically significant (p=0.045). There were no significant differences between groups in secondary outcomes.

Conclusions: Intermittent vasopressin bolus dosing was associated with faster time to a urine output goal than continuous vasopressin infusion. This may have been due to differences in illness severity at baseline.

Objective: To compare continuous vasopressin infusion to intermittent vasopressin bolus dosing for the management of central diabetes insipidus (CDI).

Self Assessment Question: Is there a benefit to continuous vasopressin infusion over intermittent bolus dosing for the management of CDI in critically-ill adults?

1:45pm – 2:00pm R **234 - Emergency Medicine Pharmacist Services Gap Analysis** Room F

Presenters: Mariah Steele

Emergency Medicine Pharmacist Services Gap Analysis
Mariah Steele, Patrick Blankenship, Kyle Allmond, Emily Duncan, Amy Porter
BMHT1 Blount Memorial Hospital
Background: The primary objective of this study was to perform a gap analysis comparing current pharmacy practices in the emergency department at a community hospital to guidelines published by American Society of Health System Pharmacists (ASHP) in 2011. The analysis was used to assess for areas of improvement in pharmacy practice in the emergency department. Secondary objectives include identifying existing barriers to performing guideline-specific roles of the emergency medicine pharmacist and making quality improvement recommendations.
Methodology: A subjective gap analysis was performed to compare current emergency medicine pharmacist services to guideline recommended services. Following this analysis, an intervention documentation form was developed based on the published guidelines. Emergency medicine pharmacists were educated on utilizing this form to record interventions. Data from emergency medicine pharmacist interventions was collected for a 6 week period (October-November 2019). The gap analysis and intervention documentation forms will be reviewed to determine areas for improvement in pharmacy services. The data will be used to identify barriers to performing the guideline-specific roles.
Results: In progress
Conclusions: In progress
Objective: Review results of gap analysis assessing emergency medicine pharmacist services at a community hospital and describe possible areas for improvement.
Self Assessment Question: Which organization published the guidelines for emergency medicine pharmacist services?
A. ASHP
B. ACEP
C. ASCP
D. ACCP

Correct Answer: A

1:45pm – 2:00pm R **237 - Risk factors for antipsychotic continuation after hospital discharge from an intensive care uni** Room I

Presenters: Kevin Straughn

Risk factors for antipsychotic continuation after hospital discharge from an intensive care uni
Kevin Straughn, Julie Thompson, Rachel Toler, Dawn MacElroy
DRHC1 Duke Regional Hospital
Background: Delirium occurs commonly in critically ill intensive care unit (ICU) patients and is often treated with antipsychotic medications. Current guidelines do not recommend the use of a pharmacologic agent for the treatment of ICU delirium. The purpose of this study was to evaluate the correlation between patient characteristics and the continuation of antipsychotic medications at hospital discharge.
Methodology: Eligible patients included those admitted to the Duke Regional Hospital (DRH) ICU who received two or more doses of an antipsychotic in the ICU. Exclusion criteria included antipsychotic use prior to hospital presentation, death before hospital discharge, pregnancy, and age <18. Baseline demographics and patient characteristics were collected and the number of ICU patients discharged from DRH with an antipsychotic prescription was determined. The primary outcome was the patient characteristics that are the strongest predictors for the continuation of antipsychotic medication at hospital discharge. The secondary outcome was the patient characteristics that are the strongest predictors for three-month hospital readmission rates in patients discharged on an antipsychotic medication.
Results: In Progress
Conclusions: In Progress
Objective: Identify risk factors for continuation of antipsychotic medications at hospital discharge.
Self Assessment Question: What are possible risk factors associated with antipsychotic continuation at hospital discharge after initiation for ICU delirium?

1:45pm – 2:00pm R **239 - Vasopressor Discontinuation in Shock with Reduced Left Ventricular Dysfunction** Room K

Presenters: Ashley Taylor

Vasopressor Discontinuation in Shock with Reduced Left Ventricular Dysfunction

Ashley Taylor, Christy Forehand, Timothy Jones, Hannah Dykes, Andrea Sikora
AUMC2 Augusta University Medical Center/University of Georgia College of Pharmacy (Critical Care)

Background: The hemodynamic management of septic shock involves fluid resuscitation and vasoactive agents; however, sepsis management for patients with left ventricular (LV) dysfunction has not been well established. Vasopressors management in septic shock can negatively impact patient outcomes, including hypotension, and current evidence is conflicting regarding the discontinuation of vasopressin before or after norepinephrine. The primary outcome of this study was to identify the incidence of clinically significant hypotension following discontinuation of vasopressin or norepinephrine.

Methodology: In this single center retrospective study, adult patients 18 years and older admitted to the pulmonary critical care service were included if they met the Sepsis-3 definition of septic shock, had LV dysfunction, and received continuous infusions of norepinephrine and vasopressin as the last vasopressors to be discontinued. Secondary outcomes included the duration of vasopressin and norepinephrine infusions, hospital and ICU lengths of stay, and in-hospital and ICU mortality. Chi-squared test will be used to evaluate the primary outcome and other categorical data.

Results: Seventy-eight patients met criteria to be included in this study. Clinically significant hypotension occurred in 28 patients (75.7%) following the discontinuation of vasopressin, compared to 43 patients (80.5%) following the discontinuation of norepinephrine ($p = 0.61$). The incidence of ICU mortality was 27% following vasopressin discontinuation and 36.6% following norepinephrine discontinuation.

Conclusions: Clinically significant hypotension occurred more frequently following the first discontinuation of norepinephrine in patients with LV dysfunction. Inferential statistics are in progress to assess findings.

Objective: Describe the incidence of clinically significant hypotension following vasopressor discontinuation in patients with septic shock and left ventricular dysfunction

Self Assessment Question: Does the discontinuation order of vasopressors affect the incidence of clinically significant hypotension in septic patients with left ventricular dysfunction?

Link to presentation: https://youtu.be/GLku25hXqM0

1:45pm – 2:00pm G **240 - Evaluation of Change in Psychotropic Medication Use After Implementation of the STAR-VA program at a VAHCS CLC** Room L

Presenters: Mary Taylor

Evaluation of Change in Psychotropic Medication Use After Implementation of the STAR-VA program at a VAHCS CLC

Mary Taylor, Brittany Melville, Natalie Brescian

SVAM1 Salisbury/W.G. Hefner VA Medical Center

Background: The purpose of this project is to evaluate if the STAR-VA program results in a change of psychotropic medication use in Veterans living in the Salisbury VAHCS CLC.

Methodology: This is a retrospective quality improvement project. Eligible subjects are Veterans residing in the Salisbury VAHCS CLC enrolled within the STAR-VA program from June 1st 2018 to October 31st 2019 who are 60 years and older and prescribed a psychotropic medication. Participants will be excluded from the study if the subject had died within six months following STAR-VA enrollment date or if a major mental illness was the primary diagnosis (e.g., schizophrenia) of the underlying cause of behaviors. The primary objective is to describe total psychotropic medication changes six months following enrollment in the STAR-VA program. Secondary objectives include describing psychotropic medication changes by medication class and the quantity of behavioral intervention notes (BIN) six months following enrollment in the STAR-VA program.

Results: Seven Veterans were included in this study. The average age was 76 years old and the majority of Veterans were male (85.7%) with severe dementia (71.4%). The number of total psychotropic agents used decreased from seventeen to sixteen. There was an increase in antidepressant use from six to seven agents and a decrease in anti-anxiety use from three to one agent. The change in amount of BIN varied between Veterans.

Conclusions: The STAR-VA program may have an impact on psychotropic use, however, a larger sample size will have to be studied for a longer duration.

Objective: Describe psychotropic medication changes six months following enrollment in the STAR-VA program

Self Assessment Question: Which psychotropic agents may have been impacted by the STAR-VA program

Video link: https://youtu.be/uVRWYY9mCWQ

1:45pm – 2:00pm | **229 - Evaluation of SGLT2 inhibitor therapy and other potential risk factors for the development of bacteremia in patients** Room A

Presenters: Kelly Slaten

Link to presentation: https://youtu.be/-QOkCVGsRvg

Evaluation of SGLT2 inhibitor therapy and other potential risk factors for the development of bacteremia in patients

Kelly Slaten, Adam Harnden, Johnathyn Britton, Elizabeth Covington
JCKH1 Jackson Hospital and Clinic

Background: Urosepsis accounts for approximately 25 percent of all sepsis cases. Early recognition of bacteremia risk factors in patients with urosepsis could allow rapid management to improve outcomes and patient care. The purpose of this study is to assess patients presenting with urosepsis and a positive urine culture (UC) to evaluate the impact of sodium-glucose co-transporter 2 (SGLT2) inhibitor receipt and other potential risk factors of developing bacteremia.

Methodology: This was a single-center, retrospective, case-control, Institutional Review Board (IRB) approved study. Patients were included if they presented with a positive UC and meet pre-specified criteria for urosepsis. Patients were categorized in one of two groups: bacteremia and non-bacteremia. The following patients were excluded: confirmed pregnancy, age less than 18 years, and/or a proven source of bacteremia outside the urogenital tract. The primary endpoint assessed the percentage of patients taking a SGLT2 inhibitor in the bacteremia versus non-bacteremia groups. Secondary endpoints assessed other potential risk factors for bacteremia. Statistical analysis included chi-square, Student's t-test, and binary logistic regression via SPSS® version 15 (SPSS Inc., Chicago, IL).

Results: A total of 162 patients were analyzed in the study (81 in each group). There was no difference in percentage of patients with or without bacteremia who received SGLT2 inhibitor therapy (p=0.499). The following were identified as independent risk factors for bacteremia in the logistic regression analysis: temperature ≥ 100.4 F, bicarbonate level < 20 mmol/L, and blood glucose level > 180 mg/dL.

Conclusions: SGLT2 inhibitors in the setting of urosepsis with positive urine cultures did not increase the risk for bacteremia in this study.

Objective: Assess if SGLT2 inhibitors increase the risk for bacteremia in the setting of patients with urosepsis and positive urine cultures.

Self Assessment Question: What risk factors for bacteremia should be assessed in a patient presenting with urosepsis and a positive UC?

1:45pm – 2:00pm O **236 - Extending Clostridioides difficile Infection (CDI) Treatment in Hematology/Oncology Patients Receiving Systemic Non-CDI Antibiotic Treatment** Room H

Presenters: Tia Stitt

Extending Clostridioides difficile Infection (CDI) Treatment in Hematology/Oncology Patients Receiving Systemic Non-CDI Antibiotic Treatment

Tia Stitt, Amber Clemmons, Kelli Keats, Bhaumik Jivan, Daniel Chastain
PPMH1 Phoebe Putney Memorial Hospital/The University of Georgia

Background: Hematology/oncology patients are at an increased risk for CDI due to ongoing immunosuppression and frequent exposure to systemic antibiotics. Guidelines provide limited recommendations on extending CDI treatment in patients receiving concomitant systemic antibiotics. The purpose of this study was to evaluate if extending CDI treatment > 24 hours beyond completion of concomitant non-CDI antibiotics in hematology/oncology patients decreased the risk of recurrence.

Methodology: This was a retrospective, multi-center, chart-review of hematology/oncology patients hospitalized in Augusta University Medical Center or Phoebe Putney Memorial Hospital with CDI from September 2013 to July 2019. Eligible patients were ≥ 18 years diagnosed with CDI who received non-CDI systemic antibiotics within 24 hours prior to diagnosis or at any time during treatment for CDI. Those included had an active malignancy with or without receipt of immunosuppressive therapies or had undergone hematopoietic stem cell transplant (HSCT). Patients were divided into study groups: those who received CDI treatment ≤ 24 hours beyond completion of non-CDI systemic antibiotics versus CDI treatment > 24 hours beyond completion of non-CDI systemic antibiotics. The primary endpoint was 180-day CDI recurrence rate after completing CDI treatment.

Results: There were a total of 198 patients included, with 60 (30.3%) patients in the ≤ 24 hours group and 138 (69.7%) patients in the > 24 hours group. Recurrence rates and vancomycin-resistant *Enterococcus* sp. (VRE) infection rates were similar between groups. The extended group had a longer length of stay and higher percentage of mortality.

Conclusions: Both groups had similar rates of recurrence suggesting that extending CDI treatment beyond completion of concomitant non-CDI antibiotics may not provide benefit, although further studies are needed.

Objective: Evaluate whether extending CDI treatment in hematology/oncology patients beyond completion of concomitant systemic antibiotic therapy will decrease CDI recurrence rates.

Self Assessment Question: What are the current recommendations from the IDSA/SHEA guideline for CDI management regarding extending CDI treatment in those who require concomitant non-CDI antibiotics?

Link to Presentation: https://youtu.be/MhLARh6DqX8

1:45pm – 2:00pm P **231 - Bupivacaine-containing elastomeric device to decrease post-procedure opioid use** Room C

Presenters: Braydon Smith

Bupivacaine-containing elastomeric device to decrease post-procedure opioid use
Braydon Smith, Matt Bibb, Michelle Wilcox
STWH1 St. Thomas West Hospital
Background: Bupivacaine-containing elastomeric devices (BEDs) continually infuse bupivacaine without the need for electricity or gravity. Around 68% of the more than 70,000 drug overdose deaths in 2017 involved an opioid. This study will assess if this device decreases post-procedure opioid usage.

Methodology: This study is a retrospective chart review of adult patients who received a video-assisted thoracoscopic surgery. The primary outcome, morphine milliequivalents usage (MME), was analyzed after obtaining all opioid-derived medications that were used during hospitalization. Secondary outcomes were assessed if there was a difference between groups in length of stay and the use of non-opioid analgesia medications including ketorolac, acetaminophen, ibuprofen, pregabalin, and gabapentin.

Results: An alpha level of 0.05 was used for all statistical tests. The primary endpoint of MME among the BEDs group was 137 ± 264.5 MME vs 158 ± 578 MME in the non-BED group (p=0.332). The secondary endpoint of different types of non-opioid adjunct medications needed resulted in a statistically significant increase in the BED group 2.2 ± 2 vs 1.0 ± 1.0 in the non-BED group (p<0.001). The other secondary endpoint, length of stay, in the BED group was 5.8 ± 8.5 days vs 4.9 ± 4.6 days in the non-BED group (p=0122).

Conclusions: The use of a BED did not result in a statistically significant difference on the endpoints of average MME or length of stay. The use of a BED resulted in a statistically significant increase in the varying types of non-opioid adjunct medication required while hospitalized.
Objective: Identify if the utilization of the bupivacaine-containing elastomeric device decreases the use of post-procedure opioid use during hospital length of stay.
Self Assessment Question: Has the utilization of the bupivacaine-containing elastomeric device decreased the use of post-procedure opioid use during hospital length of stay?

Link to presentation:
https://youtu.be/ELIaken2DME

1:45pm – 2:00pm T **238 - Evaluation of Patient and Provider Satisfaction of a Pharmacist Provding Care in the Home** Room J

Presenters: Natasha Stroedecke

Evaluation of Patient and Provider Satisfaction of a Pharmacist Provding Care in the Home
Natasha Stroedecke, Molly Hinely, Mia Yang, TSH, PF,AS,RZ
WFBH1 Wake Forest Baptist Health
Background: Assess patient and provider satisfaction after the addition of a pharmacist to their Home Based Primary Care (HBPC) and Transitional Home Visit (THV) teams.
Methodology: This is a single-center, post-intervention study that included patients enrolled in HBPC and THV at Wake Forest Baptist Health (WFBH) that qualified as medium or high risk patients and were seen by a pharmacy resident between July 1, 2019 and February 1, 2020. Providers were included if they saw the patient along with the resident during this time. A satisfaction survey was given to all participants for completion and returned to the study team. A documentation tool in the electronic medical record was used to collect the amount of time spent preparing before the visit, the amount of time spent in the home with the patient, and the medication interventions that were made. The medication interventions were placed into one of three categories: medication access/availability, pharmacotherapy management, and medication adherence.
Results: In Progress.
Conclusions: In Progress.
Objective: Identify the impact of the pharmacist on continuity of care as it contributes to increased patient and provider satisfaction.
Self Assessment Question: How does the integral role of the pharmacist contribute to patient and provider satisfaction?
https://www.youtube.com/watch?v=AkkqDPuEVco&fbclid=IwAR0cIwU0_32wLBBFXuuSM8ULPhuCDCz1AEynMzFxItjs6a-2xOmzbzYVw5g

2:00pm – 2:15pm C **251 - Evaluation of prescribing practices of anticoagulants for venous thromboembolism in patients with extremes of weight** Room K

Presenters: Connor Walsh

Evaluation of prescribing practices of anticoagulants for venous thromboembolism in patients with extremes of weight

Connor Walsh, Alexandria Hall, Michael Knauss, Alyssa Utz, Mikhail Akbashev
GMHA1 Grady Memorial Hospital

Background: Current guidelines lack direct oral anticoagulant (DOAC) therapy recommendations for management of patients with extremes of weight. The purpose of this study is to evaluate the impact of patient weight on prescribing practices of anticoagulant therapy for venous thromboembolism (VTE).

Methodology: This IRB approved retrospective chart review evaluated adult patients prescribed rivaroxaban, apixaban, enoxaparin, or warfarin at hospital discharge for VTE treatment between January 1, 2017 and December 31, 2018. Patients were stratified by BMI into three groups. The primary outcome was the percent of patients in each BMI group prescribed rivaroxaban, apixaban, enoxaparin, or warfarin. Secondary outcomes included percent of patients who experienced a bleeding event or recurrent VTE within 6 months on each anticoagulant.

Results: With a total population of 777 patients, discharge prescription data showed 394 patients were prescribed rivaroxaban, 81 apixaban, 184 enoxaparin, and 118 warfarin. Of patients receiving rivaroxaban, 11.2% had a BMI >40 kg/m2 and 7.9% had a BMI <20 kg/m2. In patients receiving apixaban, 11.1% had a BMI >40 kg/m2 and 13.6% had a BMI <20 kg/m2. In the enoxaparin group, 12.1% of patients had a BMI >40 kg/m2 and 7.6% had a BMI <20 kg/m2. In patients receiving warfarin, 18.6% of patients had a BMI >40 kg/m2 and 5.1% had a BMI <20 kg/m2. Patients with BMI <20 kg/m2 had bleeding event rates of 18%, compared to 8% in patients with BMI >40 kg/m2 and 7% in patients with BMI 20 – 40 kg/m2. Recurrent VTEs were only recorded in patients with BMI 20 – 40 kg/m2.

Conclusions: BMI did not significantly influence anticoagulant therapy prescribing practices at this institution.

Objective: Describe the impact of extreme patient weight on anticoagulant prescribing practices.

Self Assessment Question: What are potential concerns and considerations accompanying the use of DOACs in patients with extremes of weight?

2:00pm – 2:15pm Y **242 - Impact of physician-pharmacist led diabetes management on hemoglobin A1C utilizing a shared electronic health record in a rural community pharmacy.** Room B

Presenters: Lura Thompson

Impact of physician-pharmacist led diabetes management program on diabetic outcomes utilizing a shared electronic health record in a southwest Virginia community pharmacy

Lura Thompson, Michael Justice and Brent Foster
APCP1 Appalachian College of Pharmacy

Background: The Virginia Department of Health estimates that about 1 out of every 11 Virginians have diabetes. Specifically, the Southwestern part of Virginia has the highest prevalence of diabetes with 13.1% having a known diagnosis. The purpose of this study is to increase health outcomes in diabetic patients, relieve patient load from the physician, and increase patient satisfaction of disease management. Additionally, this study will facilitate and establish a business partnership between a physician and pharmacy via a shared electronic health record. Primary care physicians often are consumed by their demanding patient schedules and lack time needed to provide additional education, counseling, and disease management to patients with chronic conditions. This study will identify the direct benefit to diabetic patients while relieving the burden of patient care from the physician.

Methodology: Pharmacist will meet with patients over the age of 65 with a known diabetes diagnosis. A diabetic care plan will be provided by the partnering physician for the pharmacist to complete. The care plan will include a complete medication review and MTM services will be performed to resolve any medication related issues in order to optimize drug therapy and improve adherence with prescribed medications. Device education will be provided for patient monitoring, data evaluation, and coordination of care to prevent complications. Nutritional education, smoking cessation, and lifestyle modifications will be also be provided. Each encounter’s assessment, education plan, intervention, and outcomes will be documented in the shared electronic health record (EHR) during and/or immediately following visit using procedures or protocols outlined by the referring office. Any alerts to the prescriber may be sent (via task, call, or fax) in addition to note if recommendations or changes are warranted in patient care. Reporting data will be collected and uploaded either, daily, weekly, or monthly into secure online portal for data collection and analysis.
Results: "In Progress"
Conclusions: "In Progress"
Objective: To demonstrate how a pharmacist can impact patient outcomes through chronic care management
Self Assessment Question:
How does sharing an electronic health record with a physician impact diabetic patient outcomes?
A. Increases patient burden load on the providers
B. Allows pharmacists to give counseling specific to that patient based on access to their medications and labs
C. Causes unnecessary medication additions
D. Replaces the care patients receive from their providers

AV LINK TO PRESENTATION: https://www.youtube.com/watch?v=_wn1JaF4eHg&feature=youtu.be

2:00pm – 2:15pm R **248 - Coagulation factor Xa (recombinant) and Four-Factor Prothrombin Complex Concentrate for Reversal of Apixaban and Rivaroxaban in ICH** Room H

Presenters: Mark Vestal

Coagulation factor Xa (recombinant) and Four-Factor Prothrombin Complex Concentrate for Reversal of Apixaban and Rivaroxaban in ICH

Vestal ML, Hodulik K, Mando-Vandrick J, Friedland M, Ortel TO, Welsby IJ

DUHE2 Duke University Hospital (Emergency Medicine)

Background: Due to the FDA approval of coagulation factor Xa (recombinant; rfXa), various guidelines have either shifted to recommending rfXa over 4F-PCC for reversal of oral factor Xa inhibitors, or providing no recommendation on whether to administer rfXa or 4F-PCC. This has prompted controversy, as there have been no head-to-head trials comparing these two reversal agents. The purpose of this study is to compare the efficacy and safety of rfXa vs. 4F-PCC for reversal of apixaban or rivaroxaban in patients diagnosed with intracranial hemorrhage (ICH).

Methodology: The primary objective of this retrospective, single-center, observational study was to compare the hemostatic efficacy of rfXa vs. 4F-PCC for reversal of apixaban or rivaroxaban in ICH. Adult patients (≥18 years old) diagnosed with ICH and anticoagulated with apixaban or rivaroxaban requiring reversal with rfXa or 4F-PCC 50 units/kg (Max: 5000 units) between 7/1/2013 and 9/1/2019, were included. Patients who received alternative reversal dosing strategies, received both rfXa and 4F-PCC, or received rfXa or 4F-PCC for other anticoagulants than apixaban or rivaroxaban, were excluded. The primary endpoint was hemostatic efficacy, defined by the change in hematoma volume in the initial and subsequent computed tomography scan(s). Secondary endpoints included in-hospital mortality, incidence of thrombotic complications within 30 days, ICU and hospital length of stay, patient disposition, and 30-day readmission rate.

Results: In Progress

Conclusions: In Progress

Objective: Describe the hemostatic efficacy of coagulation factor Xa (recombinant) and four-factor prothrombin complex concentrate for reversal of apixaban and rivaroxaban in ICH.

Self Assessment Question: In patients with ICH, has coagulation factor Xa shown to be superior to four-factor prothrombin complex concentrate for reversal of apixaban or rivaroxaban in clinical trials?

2:00pm – 2:15pm R **249 - Evaluating the screening and treatment process of gonorrhea and chlamydia in the emergency department** Room I

Presenters: Tiffany Vu

Evaluating the screening and treatment process of gonorrhea and chlamydia in the emergency department

Tiffany T. Vu, Hannah Brown, Sarah Green, Amanda Teachey
NHPE2 Novant Health Presbyterian Medical Center (Emergency Medicine)

Background: Gonorrhea and Chlamydia (GC) are the most commonly seen sexually transmitted diseases in the emergency department. Empiric antibiotics are routinely used for suspected GC in the emergency department (ED) due to prolonged waiting time for results. The purpose of this study was to identify the current trends regarding gonorrhea and chlamydia screening as well as the empiric therapy provided in the emergency department across a large healthcare system.

Methodology: The study was a retrospective chart review evaluating all patients who received testing for GC. The study objectives included: the incidence of positive gonorrhea and/or chlamydia test results, the incidence of empiric therapy, the appropriateness of treatment regimens, and evaluation of risk factors for predicting a positive result.

Results: Of the 1000 patients included in the study, 162 (16.2%) had a positive test result for gonorrhea and/or chlamydia. Empiric therapy was given to 292 (29.2%) of the patients. In a subgroup analysis evaluating the appropriateness of treatment, 744 (74.4%) patients were appropriately treated and included 95 true positives and 649 true negatives. 195 patients were overtreated, receiving empiric antibiotics with a subsequent negative result, and 61 patients were undertreated, not receiving empiric antibiotics with a subsequent positive result. Risk factors that increased the likelihood across both sexes included age ≤25 and a history of a previous STD. Additional risk factors included male gender, penile discharge or inconsistent condom use (males), and PID/Trichomonas or bacterial vaginosis (females).

Conclusions: In the emergency department setting, when empiric therapy was initiated, the majority of patients were treated with preferred regimens. Given these results, accounting for risk factors in addition to pertinent complaints during the encounter can guide providers toward appropriate empiric antibiotic prescribing.

Objective: Identify risk factors that may increase the likelihood of testing positive for gonorrhea and/or chlamydia.

Self Assessment Question: Which of the following risk factors may increase the likelihood of testing positive for a GC?

2:00pm – 2:15pm R **250 - Incidence of Hypoglycemia after Treatment of Hyperkalemia with Insulin in ESRD Hemodialysis Patients in the Emergency Department** Room J

Presenters: Trinh Vu

Incidence of Hypoglycemia after Treatment of Hyperkalemia with Insulin in ESRD Hemodialysis Patients in the Emergency Department

T Vu, J Corio, L Howell, P Meloy, J Kaylor, MC Perry Jr., XA Wang, S Zack
EUHM1 Emory University Hospital Midtown

Background: Intravenous (IV) insulin is utilized in the management of hyperkalemia, however, the primary adverse event is hypoglycemia. While there is evidence favoring weight-based insulin dosing over standard dosing to minimize risk, limited evidence exists for this dosing strategy in patients with end-stage renal disease (ESRD) requiring hemodialysis (HD). The objective is to evaluate the incidence of hypoglycemia (blood glucose < 70 mg/dL) in HD patients receiving < 0.1 unit(s)/kg versus ≥ 0.1 unit(s)/kg IV insulin for hyperkalemia treatment in the emergency department (ED).

Methodology: Retrospective chart review from 1/1/2014-1/31/2019 was conducted on HD patients receiving weight-based IV insulin for hyperkalemia treatment in the ED. The primary outcome is the incidence of hypoglycemia within 6 hours after administration of IV insulin. Secondary outcomes include incidence of severe hypoglycemia (blood glucose < 40 mg/dL), amount of dextrose administered, hospital length of stay, and subgroup analysis comparing incidence of hypoglycemia in patients with and without a past medical history of diabetes.

Results: One-hundred nine encounters met the study criteria. The rates of hypoglycemia were 32.2% and 48% (p = 0.093), respectively, among the < 0.1 unit(s)/kg (n = 59) and ≥ 0.1 unit(s)/kg (n = 50) groups. Hypoglycemia occurred in 50% of patients without a history of diabetes compared to 18.9% in patients with diabetes (p = 0.002).

Conclusions: No significant differences were observed in the incidence of hypoglycemia between the two weight-based dosing strategies. Patients without a history of diabetes were more likely to develop hypoglycemia after receiving IV insulin compared to diabetic patients.

Objective: Describe the incidence of hypoglycemia in ESRD patients receiving IV regular insulin doses of < 0.1 unit(s)/kg compared with doses ≥ 0.1 unit(s)/kg for hyperkalemia treatment.

Self Assessment Question: How does the incidence of hypoglycemia in patients receiving IV regular insulin doses of < 0.1 unit(s)/kg compare to patients receiving doses ≥ 0.1 unit(s)/kg?

Contact Information: trinh.vu@emoryhealthcare.org

Link to Presention: https://www.youtube.com/watch?v=Xd1mgQRtBp8&t=3s

2:00pm – 2:15pm R **252 - Effect of quetiapine on QTc prolongation in the adult intensive care unit** Room L

Presenters: Chelsea Wamsley

Effect of quetiapine on QTc prolongation in the adult intensive care unit

Chelsea Wamsley; Eric K. Shaw; Stephanie Lesslie; Sofiya Sovalska
MHUM1 Memorial Health University Medical Center

Background: Quetiapine is an antipsychotic commonly used to treat delirium in critically ill patients. Antipsychotics are associated with a variety of adverse effects, including QTc prolongation, which increases the risk of developing a life-threatening arrhythmia known as Torsades de Point (TdP). Patients in the intensive care unit (ICU) are at a particularly high risk of QTc prolongation because of an increased potential for drug-drug and drug-disease interactions along with the occurrence of electrolyte disturbances. This study assesses the impact of quetiapine on the degree of QTc prolongation in critically ill adults.

Methodology: Patients were included if they were admitted to the ICU between July 1, 2015 to December 1, 2019, had received at least one dose of quetiapine for delirium and had a baseline QTc reading within 72 hours of the first dose of quetiapine. Patients were excluded if they were receiving antipsychotics prior to admission or for conditions other than delirium. The primary outcome was change in QTc from baseline to steady state.

Results: Out of 86 patients, the mean change in QTc from baseline was 6.8 ms (p=0.123). There was a significant difference when patients were stratified according to baseline QTc. A normal baseline QTc, defined as <450 ms, was associated with an increase of 25.4 ms (p=<0.005). Conversely, patients with an elevated QTc at baseline, from 450-499 or 500 ms, experienced a significant decrease in QTc of 15.8 and 60.6 ms respectively (p=0.030; p<0.005). Additionally, patients with a total daily dose <100 mg experienced a significant decrease in QTc by 13.3 ms (p=0.045). There was no significant difference in the degree of QTc change based on concomitant medications and no incidence of TdP.

Conclusions: Quetiapine used to treat ICU delirium in patients with a normal QTc at baseline was associated with a prolonged QTc at steady state. The question of clinical significance remains, as quetiapine was not associated with any episodes of TdP in this study. Monitoring may be warranted for patients with multiple risk factors for QTc prolongation.

Objective: To evaluate the risk of QTc prolongation with quetiapine in critically ill adults with ICU delirium

Self Assessment Question: Does quetiapine prolong QTc in patients with ICU delirium?

2:00pm – 2:15pm I **244 - EVALUATION OF PHARMACIST-LED SCREENING OF REPORTED PENICILLIN ALLERGIES IN AN INPATIENT SETTING** Room D

Presenters: My Dien Tran

EVALUATION OF PHARMACIST-LED SCREENING OF REPORTED PENICILLIN ALLERGIES IN AN INPATIENT SETTING

My Dien Tran, Khushbu Patel, Brook Jacobs

EDHD1 Emory Decatur Hospital

Background: Almost 90% of self-reported penicillin allergies are false, resulting in increased hospital length of stay, bacterial resistance, Clostridium difficile rate, and healthcare cost. As most self-reported penicillin allergies are inaccurate, screening and documentation of allergies are critical to determining appropriate treatment. The purpose of this study is to describe the impact of pharmacist-led screening, documentation and antimicrobial intervention of reported penicillin allergies.

Methodology: This single-center prospective study included patients at least 18 years of age admitted with self-reported penicillin allergy. Patients with reported anaphylactic reactions, Stevens-Johnson syndrome, toxic epidermal necrolysis, or difficulty breathing were excluded. The pharmacist interviewed patients for allergic reaction clarification and any changes were documented. Pharmacist-led interventions were made on any inappropriate antimicrobial agents such as aztreonam, carbapenems, and fluoroquinolones. The primary endpoints include number of penicillin allergy documentation changes, successfully changed antibiotics and patients who qualified for penicillin skin testing. Secondary endpoints include number of patients interviewed and patients who expressed interest in penicillin skin testing.

Results: A total of 222 patients were interviewed and provided education on penicillin allergy vs. intolerance. Of 105 documented unknown reactions, we were able to convert 63 (60%) of those reactions to a meaningful reaction. Five out of six (83%) recommended antimicrobial interventions were accepted. Of 140 patients who qualified for penicillin skin testing, 171 (77%) expressed interest.

Conclusions: Pharmacist-led screening on reported penicillin allergy leads to better allergy clarification and documentation. Majority of our patients who qualified for penicillin skin testing expressed interest in getting tested.

Objective: Identify benefits of pharmacist-led screening on penicillin allergy.

Self Assessment Question: List at least 3 barriers that can hinder the penicillin allergy clarification process.

Link to presentation: https://youtu.be/NJ05bGpu--c

2:00pm – 2:15pm L **241 - Analysis of a lower dose benzodiazepine CIWA protocol** Room A

Presenters: Sherwyn Tenia

Analysis of the Removal of Benzodiazepine Automatic Stop Times in an Alcohol Withdrawal Protocol

Sherwyn Tenia; Lauren McCluggage; Bob Lobo; David Marcovitz

VUM12 Vanderbilt University Medical Center (Administration and Leadership with Masters)

Background: Over 14 million adults in America were diagnosed with alcohol use disorder (AUD) in 2017. Approximately 25% of hospitalized medical patients have AUD, with 3-5% of them experiencing severe symptoms such as seizures and delirium. Withdrawal symptoms can begin within 6-8 hours after the last intake of alcohol, with seizures typically occuring within 48 hours and delirium within 72 hours. In July 2018, the 48-hour automatic stop time was removed from benzodiazepine doses included in the alcohol withdrawal protocol at Vanderbilt University Adult Hospital. This study aims to examine how the removal of the automatic stop time affected the treatment of alcohol withdrawal patients.

Methodology: This was a retrospective review of patients treated for AWS from January 2018 to July 2019. Inclusion criteria included patients treated with the standard institutional alcohol withdrawal protocol. Exclusion criteria included admission to an intensive care unit or deviation from the protocol. The primary outcome was the total benzodiazepine amount, in lorazepam equivalents, that patients received as part of the protocol. Secondary outcomes included incidence of significant alcohol withdrawal events, incidence of significant sedation events, hospital length of stay and length of treatment.

Results: No significant difference was seen in primary or seconday outcomes.

Conclusions: Removal of the automatic 48-hour stop time for benzodiazepines did not have a significant effect on the treatment of alcohol withdrawal patients.

Objective: Explain the potential benefits obtained from removing the automatic stop time from benzodiazepine orders used for the treatment of AWS

Self Assessment Question: Does removal of the 48-hour stop time from benzodiazepine orders affect the amount of benzodiazepine patients received for alcohol withdrawal treatment?

2:00pm – 2:15pm L **245 - Improving the Appropriate Use of Benzodiazepines in Adults at Community Hospital** Room E

Presenters: Kelli Travis

Improving the Appropriate Use of Benzodiazepines in Adults at Community Hospital

Kelli Travis
NHAG1 Northside Hospital

Background: Prescriptions for benzodiazepines have increased 67% between 1996 and 2013 and are associated with 29.4% of pharmaceutical-related overdose deaths in 2010, second only to opioids. Benzodiazepines may be prescribed safely in the short-term but are only indicated when the disorder is severe, disabling, or the patient is in severe distress. Long term use and concurrent use with other CNS depressants, such as opioids, can increase the risk of serious adverse effects including respiratory depression, drug abuse, and death. Benzodiazepines should be used at the lowest effective dose for the shortest duration possible.

Methodology: This is a retrospective chart review of patients admitted to a community hospital who received a benzodiazepine between June 2019 and December 2019. Study subjects were analyzed to determine if the benzodiazepine prescribed was appropriate and if any adverse events were correlated with the medication's use. This data will be compared to subjects prescribed a benzodiazepine post-implementation of an appropriate use guideline. The appropriate use guideline will provide guidance on benzodiazepine indications, dosing, and frequency.

Results: Eighty-eight patients with 127 benzodiazepine prescriptions were reviewed from 2019. Fourty-six (36%) prescriptions for benzodiazepines were prescribed inappropriately due to inappropriate initial dose (55%), frequency (21%), and/or indication (9%), and/or receiving an unnecessary prescription at discharge (15%). Additionally, 22 (31%) patients experienced a fall or oversedation event after receiving a benzodiazepine. Of the 22 patients who experienced these adverse events, 10 patients were over the age of 65 and 12 patients had received a benzodiazepine and opioid concurrently. Results post implementation are pending.

Conclusions: Data demonstrates that there are many areas that benzodiazepine use can be improved throughout the health system. The goal of the appropriate use guideline is to provide education and lead prescribers to more optimal usage of benzodiazepines.

Objective: Describe appropriate uses of benzodiazepines and pharmacist interventions to reduce inappropriate use.

Self Assessment Question: What factors must be taken into consideration when deciding if a benzodiazepine is appropriate for a specific patient?

https://www.youtube.com/watch?v=5Uepg8xw4PA&feature=youtu.be

2:00pm – 2:15pm L **246 - EVALUATION OF UNTOWARD EFFECTS OF PARENTERAL GLUCOCORTICOID USE IN COPD EXACERBATIONS IN THE ACUTE INPATIENT SETTING** Room F

Presenters: Tanner Truesdell

EVALUATION OF UNTOWARD EFFECTS OF PARENTERAL GLUCOCORTICOID USE IN COPD EXACERBATIONS IN THE ACUTE INPATIENT SETTING

Tanner Truesdell, Derek Gaul
SJCH1 St. Joseph's/Candler Health System

Background: Determine adverse effects attributable to parenteral glucocorticoids in patients hospitalized for acute exacerbations of COPD using a cutoff of 100mg of methylprednisolone per day.

Methodology: This investigation was a retrospective, observational, chart review and analysis of patient data. Patients reviewed were admitted to Saint Joseph’s Candler Hospital between May 1, 2016 and April 30, 2018. Patients were selected for screening if they had ICD10 codes consistent with an acute COPD exacerbation. Their accounts were then cross-referenced for steroid use. Patients were grouped into oral or intravenous use. The intravenous group was further divided by those who received more or less than 100mg of methylprednisolone a day. Patients were evaluated for new or increased insulin use as a result of blood sugars over 180mg/dL.

Results: A total of 125 patients were evaluated with 50 patients in each IV steroid group and 25 in the oral group. Eleven patients (44%) in the oral steroid group had blood glucose levels over 180mg/dL while sixty-six patients (66%) in the IV steroid group had hyperglycemia (p-value 0.043). New or increased insulin use was recorded in twenty-four patients (48%) who received more than 100mg of methylprednisolone compared with six patients (24%) in the oral group (p-value 0.045)

Conclusions: We observed an increased incidence of hyperglycemia in the IV steroid group compared to the oral steroid group. This may have contributed to our observation that patients in the high dose IV group were more likely to receive new or increased insulin compared to those in the oral steroid group.

Objective: Identify possible adverse effects associated with high dose steroid use.

Self Assessment Question: Is there a reason to favor guideline-based doses for acute COPD exacerbations?

LINK TO PRESENTATION
https://youtu.be/YRaf-e1DgrQ

2:00pm – 2:15pm O **243 - Treatment driven by molecular testing for metastatic non-small cell lung cancer at an urban academic medical center** Room C

Presenters: Joseph Torrisi

Treatment driven by molecular testing for metastatic non-small cell lung cancer at an urban academic medical center

J Torrisi, J Cebollero, S Walton, JA LaFollette, MA Curry
GMHO2 Grady Memorial Hospital (Oncology)

Background: Historically, non-small cell lung cancer (NSCLC) has been treated using chemotherapy. Discovery of oncogenic events that drive tumor initiation and progression led to the identification of treatable therapeutic targets. Targeted therapy has improved response rates, survival, and decreased toxicity. The National Comprehensive Cancer Network (NCCN) recommends broad molecular profiling to identify mutations for which targeted therapies may be available.

Methodology: A retrospective chart review of molecular testing in patients diagnosed with Stage IV NSCLC between 1/2017 and 12/2018 was conducted. The primary objective of this quality improvement project was to evaluate appropriateness of initial treatment in patients with advanced NSCLC based on molecular testing. Appropriateness was assessed using NCCN treatment algorithms. Secondary objectives included molecular tests ordered, time to treatment initiation, duration of initial treatment, and reasons for discontinuation.

Results: Of 276 evaluable patients, 145 had metastatic NSCLC and were included for analysis. Molecular testing was conducted in 94% (n=136/145) of patients, of which 69% (n=94) yielded a positive result. The primary outcome included fifty-five patients who had a positive molecular test result and initiated treatment. Initial treatment was considered appropriate in 87% of patients (n=48/55). The mean time to molecular test result was 18 days and median time to treatment initiation was 43 days. Delays in treatment initiation included time to molecular test result and patient noncompliance with provider visits. Of the patients initiated on treatment, 58% discontinued after a mean of 214 days (range 1-721 days). Reasons for treatment discontinuation included disease progression (n=5) and treatment intolerance (n=9).

Conclusions: Initial treatment of Stage IV NSCLC was appropriately driven by molecular testing for the majority of patients evaluated. Delay in treatment initiation is an identified opportunity for improvement.

Objective: Evaluate the appropriateness of initial treatment in patients with advanced NSCLC based on molecular testing.

Self Assessment Question: True/False: Initial treatment was appropriate in 87% of patients.

2:00pm – 2:15pm O **247 - Effectiveness of olanzapine addition for chemotherapy-induced nausea and vomiting in autologous hematopoietic stem cell transplant recipients** Room G

Presenters: Esther Tse

Effectiveness of olanzapine addition for chemotherapy-induced nausea and vomiting in autologous hematopoietic stem cell transplant recipients

Esther Tse, Rebecca Worden, Amanda Edwards
NHF1 Novant Health Forsyth Medical Center

Background: Chemotherapy-induced nausea and vomiting (CINV) is common in patients who receive conditioning regimens prior to autologous HSCT. While a multimodal treatment approach is generally recommended, further investigation is warranted to identify the most appropriate antiemetic agents for CINV in this patient population. This study will assess the incidence of emesis associated the addition of olanzapine to the standard triplet antiemetic regimen.

Methodology: This was a retrospective chart review approved by the local institutional review board. Patients who underwent autologous HSCT between September 1st, 2018 and January 31st, 2020 were included in the study and relevant information was extracted from the electronic health record. The primary endpoints were the presence of nausea during hospital admission and episodes of emesis during the acute, delayed, and protracted phases.

Results: A total of 42 cases of autologous HSCT were included in the analysis. Nausea was present in 16/19 (84%) and 23/23 (100%) cases in the olanzapine group, and the no-olanzapine group, respectively (p=0.169). The number of emesis episodes documented with not significant between the olanzapine and no-olanzapine group across the acute (p=0.945), delayed (p=0.663), and protracted (p=0.369) phases. The number of patients who experienced engraftment syndrome were significantly lower in the olanzapine group (10.5% vs. 47.8%; p=0.023) but length of stay was similar between teh two groups (16 vs. 18 days, p=0.86).

Conclusions: The study did not demonstrate improved CINV outcomes with the addition of olanzapine to the standard triplet anti-emetic regimen. Limitations include this being a retrospective study with a small sample size. Larger randomized studies are needed to evaluate the effectiveness of olanzapine addition for CINV in autologous HSCT recipients

Objective: Describe the impact of olanzapine addition to the standard of care anti-emetic regimen in autologous hematopoietic stem cell transplantation (HSCT) recipients

Self Assessment Question: Which of the following outcomes were significantly improved with the addition of olanzapine in this study? A.) Presence of nausea during hosptial admission B.) Episodes of emesis during hospital admission C.) Duration of resuce antiemetic use D.) None of the above

Presentation Link: https://www.youtube.com/watch?v=BOUlSiSvVh0&feature=youtu.be

Please contract Esther Tse at ertse@novanthealth.org with any further questions.

2:15pm – 2:30pm B **254 - Pharmacist outreach to increase appropriate spironolactone prescribing in heart failure patients with reduced ejection fraction** Room B

Presenters: Erin Wei

Pharmacist outreach to increase appropriate spironolactone prescribing in heart failure patients with reduced ejection fraction

Erin Wei, Benjamin Smith, Patrick Gregory, Cary Ward
DUHA2 Duke University Hospital (Ambulatory Care)

Background: Progression of heart failure is thought to be related to the activation of the sympathetic and renin-angiotension-aldosterone system, which leads to myocardial remodeling and progressive reduction in cardiac output. RALES (1999) supports the use of spironolactone, an aldosterone antagonist, in addition to standard guideline-directed medical therapy to reduce mortality and hospitalizations in patients with heart failure with reduced ejection fraction. However, spironolactone is still frequently underutilized in practice. One study, published three years after RALES, examined four urban teaching hospitals and found that only 14% of all qualifying patients were appropriately prescribed spironolactone. Duke Population Health Management Office (PHMO) has generated a report identifying patients who are not currently being prescribed spironolactone despite a listed diagnosis of heart failure with reduced ejection fraction. The objective of this study is to conduct a pharmacist quality improvement initiative through outreach efforts to providers on behalf of patients or direct contact with patients identified as potentially benefitting from spironolactone therapy.
Methodology: A single-center, quasi-experimental, pre-post interventional study will be conducted on patients with a Duke Health primary care provider and eligible for PHMO services. All adult heart failure patients with an ejection fraction less than 35% and no aldosterone antagonist currently prescribed will be included. Patients will be excluded if they are pregnant or breastfeeding, have a documented hypersensitivity reaction to either spironolactone or eplerenone, are not currently on a beta-blocker and angiotensin-converting enzyme inhibitor therapy, most recent serum creatinine greater than or equal to 2, most recent potassium level greater than or equal to 5, or most recent systolic blood pressure less than 90 mmHg. Pharmacist outreach with a standardized message prompting for appropriate prescribing of spironolactone will be sent to the provider approximately one week prior to an upcoming patient appointment. Follow up on spironolactone initiation rates will be conducted one month after the scheduled appointment has occurred. Other data endpoints that will be evaluated include age, race, prevalence of spironolactone prescribing from cardiologists compared to primary care physicians, number of patients who did not show up to a clinic appointment, number of patients who are not currently under the care of a cardiologist, and concurrent use of other heart failure guideline-directed medications. This data will then be utilized to characterize the impact of pharmacist outreach on appropriate spironolactone prescribing heart failure patients with reduced ejection fraction, identify potential barriers in prescribing practices, and improve health outcomes in this population subset.
Results: In Progress
Conclusions: In Progress

Video Link for Full Presentation: https://youtu.be/nZmx-za7_KA

Objective: Identify and address the spironolactone prescribing gap in heart failure with reduced ejection fraction patients who may potentially benefit from this therapy.
Self Assessment Question: Which of the following was shown to be the largest barrier for appropriate spironolactone prescribing in this study's population?

2:15pm – 2:30pm B **259 - Evaluation of a referral-based clinical pharmacist opioid tapering service in an integrated healthcare system** Room G

Presenters: Shannon White

Background: Pain is one of the most commonly reported reasons for physician visits. The risks of chronic opioid use have been well described, but several barriers exist to physician opioid tapering. Multiple studies have reported recommendations to taper chronic opioids made by clinical pharmacists. Further studies are needed to evaluate patient outcomes and effectiveness of pharmacist services in opioid tapering.

Methodology: This project was exempt from IRB review after evaluation by the local research determination team. Patients referred to a clinical pharmacist opioid tapering service from November 2018 through May 2019 at Kaiser Permanente Georgia were eligible for inclusion. Patients with opioid use disorder were excluded. The primary outcome was change in MME at six months post-referral. Secondary outcomes included the change in number of patients co-prescribed and benzodiazepine or sedative hypnotic, change in patient-reported pain score, change in active naloxone prescription, and the implementation rate of clinical pharmacist recommendations. Data was collected via retrospective chart review of the electronic medical record.

Results: Fifty-five patients were evaluated. The most common pain diagnosis was neuropathy and most common opioid was oxycodone/acetaminophen. The average pre-referral MME was 60, and the average six-month post-referral MME was 49, demonstrating a decrease of 25%. There was no change in patient-reported pain score. Naloxone prescription availability was increased by 20%. Thirty-two percent of opioid taper recommendations made by the clinical pharmacist were fully or partially implemented at the following visit, and the average percent change in MME for these patients was 37%.

Conclusions: Referral to a clinical pharmacist opioid tapering service was associated with a decrease in MME with no change in patient-reported pain score. Referral was also associated with an increase in the percentage of patients with an active naloxone prescription.

Objective: Describe outcomes of a clinical pharmacy opioid tapering service in the outpatient setting.

Self Assessment Question: Referral to a clinical pharmacy opioid tapering service may be associated with which of the following outcomes?

Link to presentation: https://vimeo.com/user113011036/review/410619236/1be912dc3d

2:15pm – 2:30pm B **261 - Initiation of Pharmacist-Lead Physician Education of Naloxone Counseling and Prescribing in the Outpatient Setting** Room I

Presenters: Abigail Wiggins

Initiation of Pharmacist-Led Physician Education of Naloxone Counseling and Prescribing in the Outpatient Setting

The 2016 CDC Guideline for Prescribing Opioids for Chronic Pain addresses not only safer opioid prescribing but also encourages naloxone education and prescribing for patients at elevated risk of overdose. The purpose of this study was to determine if educating physicians in the Piedmont Columbus Regional Family Medicine Center lead to increased frequency of naloxone education and prescribing in patients at a high risk of opioid overdose.

Link: https://youtu.be/sI5l5OhYdW8

2:15pm – 2:30pm Y **255 - Feasibility of Implementing Point-of-Care Influenza Testing and Protocol Driven oseltamivir Dispensing by Outpatient Health System Pharmacists** Room C

Presenters: Taylor Wells

Feasibility of Implementing Point-of-Care Influenza Testing and Protocol Driven oseltamivir Dispensing by Outpatient Health System Pharmacists

Taylor S. Wells, A. Wright, E. Hudson, H. McLeod, T. Gay, E. Ghassemi
CFVM Cape Fear Valley Medical Center

Background: Point-of-care (POC) testing is a service retail pharmacies are implementing as a source of revenue; However, it is unknown if offering POC influenza (flu) testing and protocol-driven oseltamivir dispensing in a health system pharmacy may assist with cost avoidance and decreasing emergency department (ED) visits. This study's purpose is to determine feasibility and potential cost-savings associated with implementing POC flu testing along with protocol-driven oseltamivir dispensing in an outpatient pharmacy for eligible patients.

Methodology: This is an IRB approved, single center, retrospective review of medical records. Patients seen in the Cape Fear Valley ED between 10/1/18 and 5/1/19 were identified for analysis and included if ≥12 and ≤70 years of age with flu-related diagnosis codes. Patients were excluded if they were pregnant/breastfeeding, allergic to oseltamivir, recently diagnosed with pneumonia, or recently received a live flu vaccine. Patient demographics, vitals, health conditions, and symptom presentation were collected to determine patient eligibility for outpatient influenza testing based on a pre-specified protocol. The primary endpoint is the number of patients eligible for flu testing and protocol-driven oseltamivir dispensing. The secondary endpoint is the potential health system cost savings associated with the service in an outpatient pharmacy.

Results: Between 10/1/18 and 5/1/19 there were 1,955 visits to the Cape Fear Valley ED with the primary diagnosis of flu. Of these, 1,504 patients were excluded based on age, leaving 451 patient charts for review. Of those 451, only 49 qualified for outpatient POCT, which was mostly due to vital signs outside of the pre-specified range. This resulted in an estimated savings of $379.83.

Conclusions: Based on the pre-determined institutional protocol, POCT for influenza is not feasible in the outpatient pharmacies at Cape Fear Valley Health System. Further revisions need to be made to the protocol in order to reassess feasibility. POCT for influenza would help to reduce health system costs, if a more appropriate protocol could be developed.

Objective: At the conclusion of my presentation, the participant will be able to identify barriers to implementing POC influenza testing and protocol-driven oseltamivir dispensing in an outpatient pharmacy.

Self Assessment Question: Which of the following is NOT a barrier to implementing POC influenza testing and protocol-driven oseltamivir dispensing in an outpatient pharmacy?

Link to presentation: https://youtu.be/8ItmveQyH3Y

2:15pm – 2:30pm R **262 - Gabapentin as an adjunctive agent for the inpatient management of alcohol withdrawal in an intensive care unit** Room J

Presenters: Katherine Wilbur

Gabapentin as an adjunctive agent for the inpatient management of alcohol withdrawal in an intensive care unit
Katherine Wilbur, Kaitlyn Robinson, April Quidley
VMCG1 Vidant Medical Center
Background: To reduce the amount of benzodiazepines administered, gabapentin, a GABA analog, has been used increasingly in the inpatient treatment of alcohol withdrawal . Data surrounding the use of gabapentin and phenobarbital as combination therapy for the management of alcohol withdrawal are lacking. At VMC, patients are started on a gabapentin taper on admission for prevention and treatment of alcohol withdrawal when admitted to the Neurosciences ICU (NSICU). The purpose of this study is to evaluate the impact of gabapentin monotherapy and gabapentin in combination with phenobarbital on symptom management using the Clinical Institute Withdrawal Assessment for Alcohol-Revised (CIWA-Ar) score.
Methodology: This single center, retrospective review, included adult patients admitted to the NSICU receiving gabapentin with or without phenobarbital for the management of alcohol withdrawal between 8/1/2017 and 12/31/2018. Data were obtained through electronic health record reports and evaluation of patient medical records
Results: A total of 21 patients were included for analysis, 12 patients received gabapentin monotherapy and 9 patients received gabapentin plus phenobarbital. In the preliminary analysis, daily CIWA scores were significantly greater in the gabapentin plus phenobarbital group compared to gabapentin monotherapy. The change in maximum daily CIWA scores, however, was not significant between groups. Further data analysis of secondary endpoints is ongoing.
Conclusions: Preliminary results suggest that patients with higher CIWA scores received gabapentin plus phenobarbital, whereas patients with lower CIWA scores received gabapentin monotherapy. There was no significant difference in the change in maximum daily CIWA scores. These results suggest that gabapentin monotherapy may be adequate for mild withdrawal when compared to gabapentin and phenobarbital combination therapy for more severe withdrawal.
Objective: Identify the potential role of gabapentin for use in alcohol withdrawal.
Self Assessment Question: What benefits do gabapentin provide for use in alcohol withdrawal syndrome?
https://www.youtube.com/watch?v=v0BHO9bxxyE&feature=youtu.be

2:15pm – 2:30pm R **263 - Evaluation of status epilepticus treatment in adults at an academic medical center** Room K

Presenters: Christopher Wilson

Evaluation of status epilepticus treatment in adults at an academic medical center
Christopher Wilson, Breanna Carter, Lacie Bradford, Jake Mckay
EHSC1 Erlanger Health Systems
Background: Status epilepticus (SE) should be quickly and aggressively treated in order to reduce associated morbidity and mortality. Antiepileptic drug (AED) selection and dosing should be evidence-based in order to effectively treat SE while limiting potential adverse events. A SE protocol was developed and implemented as a part of this study in an attempt to improve treatment of patients with SE.
Methodology: This retrospective study was approved by the Institutional Review Board. Adult patients diagnosed and treated for SE were included for analysis. Exclusion criteria included pregnancy, hypoglycemia, postanoxic seizures, or requirement of emergent invasive intervention at the time of seizure development. The primary outcome assessed AED usage, including dosage and place in therapy between the pre-protocol and post-protocol group. Secondary outcomes included adverse events associated with AED administration, therapeutic drug monitoring, continuous electroencephalography usage, intensive care unit and hospital length of stay, intubation status, and mortality.
Results: In Progress
Conclusions: In Progress
Objective: Describe trends in status epilepticus treatment and changes in practice resulting from implementation of a status epilepticus order set.
Self Assessment Question: Which of the following is an effective strategy to improve adherence to evidence-based AED selection and dosing for treatment of status epilepticus?
Link to presentation: https://www.youtube.com/watch?v=2qawE31lAMc

2:15pm – 2:30pm G **256 - Use of proton pump inhibitors for gastroprotection in Veterans receiving aspirin and enrolled in Home Based Primary Care at the Salisbury VA** Room D

Presenters: Tess Wells

Use of proton pump inhibitors (PPIs) for gastroprotection in Veterans receiving aspirin and enrolled in Home Based Primary Care at the Salisbury VA

Teresa Wells, Mary Caputi, Courtney Hines
SVAM1 Salisbury/W.G. Hefner VA Medical Center

Background: Home Based Primary Care (HBPC) is a subset of primary care within the VA where Veterans receive primary care at home. Many Veterans in HBPC are on aspirin for cardioprotection as well as a proton pump inhibitor (PPI) for gastroprotection. The recommendations for aspirin use in primary prevention of cardiovascular disease have changed based on the 2019 ACC/AHA Guidelines and many Veterans are not receiving therapy per current recommendations. Recent literature has suggested that the PPI's as a class may not be innocuous with increasing rates of infection and electrolyte depletion reported. The purpose of this project was to develop an algorithm for use by providers to standardize decision-making regarding aspirin and proton pump inhibitor use.

Methodology: The study population was Veterans enrolled in HBPC at Salisbury VA Health Care System (SVAHCS) receiving aspirin. An algorithm was created based on current evidence to determine if there was an indication for aspirin and if adjuvant PPI therapy was justified. All Veterans in HBPC receiving aspirin were analyzed using the algorithm; descriptive statistics were used to quantify the results. The results and algorithm were shared with HBPC providers for their use in practice.

Results: Fifty-nine percent [59%, N=32] of Veterans were receiving aspirin per guideline recommendations. PPIs were also prescribed appropriately in a majority of Veterans based on risk factor stratification. 54% of Veterans analyzed in the study were on at least one medication that was not indicated or justified.

Conclusions: Due to lack of guideline-based evidence, a standardized approach is needed to clarify proton pump inhibitor prescribing in Veterans on aspirin for secondary prevention.

Objective: Identify Veterans who may be candidates for aspirin deprescribing and/or proton pump inhibitors (PPIs) based on algorithmic risk factor analysis.

Self Assessment Question: What are additional risk factors for a GI bleed when a patient is receiving aspirin based on the algorithm created?

Please view my presentation here: https://www.youtube.com/watch?v=ZywCjH-zs_E&feature=youtu.be

2:15pm – 2:30pm | **257 - Outcomes associated with changing from MicroScan to MALDI-TOF/Phoenix technology in a mid-size community hospital** Room E

Presenters: Caitlyn Whitaker

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

Authors: Caitlyn Whitaker, Brad Crane, Susan Roberts, Madison Iman

Institution: BMHT1 Blount Memorial Hospital

Background: Blount Memorial Hospital (BMH) is a 304 bed community hospital with an in-house microbiology lab that is open 7 days a week from 6am-2pm. BMH previously used the MicroScan Walkaway by Beckman-Coulter for both organism identification (ID) and antimicrobial susceptibility testing (AST). In October 2019, BMH implemented Matrix Assisted Laser Desorption Ionization Time of Flight (MALDI-TOF) by Bruker for organism ID with Phoenix M50 by BD for AST. Anticipated faster time to organism ID and enhanced AST panels in combination with our established antimicrobial stewardship program is expected to impact antimicrobial therapy and patient outcomes. The purpose of this investigation is to evaluate the impact of changing from MicroScan to MALDI-TOF/Phoenix on various aspects of infection treatment in a community hospital.
Methodology: In this IRB-approved retrospective chart review, patients were identified from reports of positive wound, urine and sputum cultures generated through Sunquest in July 2019 for MicroScan and November 2019 for MALDI-TOF/Phoenix. Sunquest reports provided result times for gram stain, ID and AST. The electronic medical record (EMR) was utilized to determine when antimicrobials were prescribed, hospital/ICU length of stay, and pharmacist interventions.
Results: In progress.
Conclusions: In progress.
Objective: Describe the potential impact of change from MicroScan to MALDI-TOF/Phoenix technology.
Self Assessment Question: What are potential benefits of changing traditional organism identification methods to MALDI-TOF technology in a community hospital with an established antimicrobial stewardship program?

2:15pm – 2:30pm | **258 - The association of a source-directed therapy sepsis order set with appropriate antibiotic use in patients with sepsis secondary to pneumonia** Room F

Presenters: Campbell White

The association of a source-directed therapy sepsis order set with appropriate antibiotic use in patients with sepsis secondary to pneumonia

Campbell White, Serina Tart, Austin Everette, Michael Crawford
CFVM Cape Fear Valley Medical Center

Background: In United States hospitals, sepsis is the leading cause of in-hospital death. Cape Fear Valley Medical Center (CFVMC) has introduced a source-directed antibiotic sepsis order set to assist in the appropriate prescribing of antibiotics. The objective of this study was to determine if the use of a source directed antibiotic sepsis order set increases appropriate empiric antibiotic prescribing.

Methodology: A retrospective chart review was performed on adult patients with an admission diagnosis of sepsis secondary to pneumonia at CFVMC from November 1, 2019 to January 31, 2020. The primary outcome was rates of appropriate empiric antibiotic prescribing in patients in which the sepsis order set was utilized versus patients in which the sepsis order set was not utilized. Secondary outcomes were the use of the sepsis order set, durations of therapy, and adverse event rates.

Results: Seventy-eight patients were included in the study. Only one patient received antibiotics ordered with the sepsis order set. 60.3% received appropriate antibiotics. There was a low percentage of patients (21.8%) who received seven days or less of antibiotics. Twelve patients experienced an adverse drug event with the most common being acute kidney injury (92%).

Conclusions: Based on the limited use of the sepsis order set in this study, it is uncertain if the use of a sepsis order set increases appropriate antibiotic use, decreases durations of therapy, or decreases adverse drug events. Possible reasons for the lack of utilization of the sepsis order set among providers may be an unawareness of the existence of the order set, an inability to operate the order set, or the efficiency of the order set.

Objective: Discuss influencing factors of empiric antibiotic prescribing for sepsis secondary to pneumonia
Self-Assessment Question: Which of the following patients diagnosed with sepsis secondary to pneumonia has an indication for broader-spectrum antibiotics?
https://www.youtube.com/watch?v=GmJJ4O1baPc

2:15pm – 2:30pm | **260 - Evaluation of Oxacillin-Susceptible, Methicillin-Resistant Staphylococcus aureus (OS-MRSA) at a Community Hospital** Room H

Presenters: Chris Whitman

Click Here for Video Presentation

Evaluation of Oxacillin-Susceptible, Methicillin-Resistant Staphylococcus aureus (OS-MRSA) at a Community Hospital

Chris Whitman, Chris Harrison, Darrell Childress, Ricardo Maldonado

EAMC1 East Alabama Medical Center

Background: Beta-lactam resistance in methicillin-resistant Staphylococcus aureus (MRSA) is determined by the presence of the mecA gene, which encodes a modified penicillin-binding protein (PBP2a) that has poor affinity for nearly all beta-lactam antibiotics. The purpose of this study is to investigate the prevalence and epidemiology of oxacillin-susceptible, mecA positive, S. aureus (OS-MRSA) at a community hospital.

Methodology: In this retrospective, single-center study, microbiology reports from January 2011 to June 2019 were reviewed to identify patients with infections caused by MRSA. Antimicrobial susceptibility testing was performed per the Clinical Laboratory Standards Institute (CLSI) guidelines. The primary outcome measure is the percentage of patients with OS-MRSA, as defined by an oxacillin MIC ≤ 2 mg/L with a positive cefoxitin screen, compared to MRSA. To assess clinical features and secondary outcomes between the groups, a randomized MRSA sub-group was identified.

Results: The incidence of OS-MRSA was 3% (30/1005). The average total days of antibiotic therapy were higher for the MRSA sub-group (39.8 ± 26.8) as compared to the OS-MRSA group (30.6 ± 31.0 days) (p=0.219). There was not a statistical difference in the hospital length of stay between groups (12.6 ± 8.8 days vs 14.4 ± 9.8 days, p=0.468).

Conclusions: To the best of our knowledge, the findings described in this study represent the first epidemiological description of OS-MRSA in a community hospital. OS-MRSA was identified in both community and hospital infections. The results of this study demonstrate the clinical importance of testing S. aureus isolates for the mecA gene. However, given the small sample size, additional studies are warranted to validate this data.

Objective: Describe the clinical relevance of OS-MRSA and discuss the appropriate identification of MRSA.

Self Assessment Question: Which of the following antibiotics should be used as a surrogate agent to identify MRSA when performing broth microdilution on an automated susceptibility test system?

Click Here for Video Presentation

2:15pm – 2:30pm I **264 - Comparison of alternative vancomycin dosing methods using area under the curve (AUC) based monitoring in obese patients** Room L

Presenters: Lauren Wright

Comparison of alternative vancomycin dosing methods using area under the curve (AUC) based monitoring in obese patients

L. Wright, D. Childress, M. Brown, W. Wilkerson, R. Maldonado, S. Durham

EAMC1 East Alabama Medical Center

Background: Dosing vancomycin in obese patients can be challenging. Current guidelines recommend 15-20 mg/kg doses targeting trough levels of 10-20 mcg/mL. Alternative vancomycin dosing strategies in obese patients using corrected body weight calculations, allometrically scaled doses and lower mg/kg doses have been studied evaluating initial trough levels with success. Recent studies demonstrate benefits of AUC-based vancomycin monitoring when targeting AUCs of 400-600 mcg*H/mL. This study compares attainment of target AUCs using various vancomycin dosing methods in obese patients.

Methodology: Patients admitted between October 2018 and June 2019 who received allometrically dosed vancomycin were reviewed. Patient-specific AUCs were calculated using the trapezoidal rule and two steady-state, post-infusion vancomycin levels. Predicted AUCs using patient-specific vancomycin clearance was calculated for the following alternative dosing methods: allometric, corrected body weight (CBW) using 15 mg/kg, and 12.5 mg/kg total body weight (TBW). Each was compared to a predicted AUC based on 15 mg/kg TBW doses. The primary outcome was attainment of initial AUC within goal range for each dosing method.

Results: A total of 84 patients were included. Initial AUC between 400-600 mcg*H/mL was achieved in 63% of CBW doses, 57% for both allometric and 12.5 mg/kg, and 37% for 15 mg/kg. All alternative dosing methods were statistically significant compared to guideline-based dosing ($p < 0.05$). The average AUC for each dosing method was as follows: 480 mcg*H/mL for CBW, 557 mcg*H/mL for allometric, 546 mcg*H/mL for 12.5 mg/kg, and 653 mcg*H/mL for 15 mg/kg ($p < 0.05$).

Conclusions: Alternative dosing methods of vancomycin were significantly more likely to achieve initial AUC within range vs. conventional 15 mg/kg doses in obese patients. Further studies are needed to optimize vancomycin dosing in obese patients.

Objective: Describe alternative vancomycin dosing methods in obese patients

Self Assessment Question: Which dosing method had the highest percentage of initial target attainment?

Link: https://youtu.be/KNiM_A61Fac

2:15pm – 2:30pm L **253 - Impact of Deprescribing Proton Pump Inhibitors (PPIs) and the Recurrence of Gastroesophageal Reflux Disease (GERD) Symptoms** Room A

Presenters: Yulonda Warren

Impact of Deprescribing Proton Pump Inhibitors (PPIs) and the Recurrence of Gastroesophageal Reflux Disease (GERD) Symptoms

Yulonda Warren, Tonya Thomas, Kelley Baxter

STWH1 St. Thomas West Hospital

Background: 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. Adverse effects include bone fractures, pneumonia, Clostridiodes difficile infection, acute and chronic kidney disease, and hypomagnesemia. The purpose of this study is to successfully deprescribe PPIs and evaluate the impact on the recurrence of GERD symptoms.

Methodology: 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: In Progress

Objective: Assess the recurrence of GERD symptoms for patients deprescribed PPIs.

Self Assessment Question: Does deprescribing PPIs lead to a recurrence of gastroesophageal reflux symptoms 30 and 60 days after discontinuation?

https://youtu.be/oDaErtXvvds

2:30pm – 2:45pm **273- Placeholder** Room I

Presenters: Hibah Missoum

Optimizing the medical management of patients with diabetes and established ASCVD by utilizing guideline directed risk reduction strategies

Hibah Missoum, DeeAnn Dugan, Roger Lander

Samford Univeristy (Ambulatory Care)

Background:
Atherosclerotic cardiovascular disease (ASCVD) is the leading cause of morbidity and mortality in individuals with diabetes. While diabetes itself poses an increased risk of ASCVD, common coexisting conditions like hypertension and dyslipidemia must also be addressed when attempting to reduce ASCVD risk in patients with type 2 diabetes.

Along with controlling comorbidities, the treatment of type 2 diabetes centers around glucose control. The therapeutic approaches of blood glucose control in patients with type 2 diabetes have been reshaped by recent data showing antihyperglycemic agents' ability to provide further risk reduction.

Given the low national use rate of antihyperglycemics with cardiovascular benefit, we became curious to see how often these agents were prescribed at our institution. This study is a quality improvement study that is setting out to identify whether an opportunity exists to optimize risk reduction strategies in patients with diabetes and established ASCVD whose chronic conditions are being managed at Lifestyle Management of Birmingham.

Methodology: This study is a single center, retrospective chart review that inlcudes all patients with type 2 diabetes and established ASCVD. Patients were excluded if they were pregnant, <19 years of age, had an intolerance or allergy to any agents evaluated, LDL <70 mg/dL, family or personal history of thyroid cancer, A1c at goal on metformin alone, or personal history of bleeding.

Results: In progress

Conclusion: In progress

2:30pm – 2:45pm A **265 - Evaluation of academic detailing to influence pharmacists' compliance with an outpatient pharmacy partial fill policy** Room A

Presenters: Rebecca Wynn

Evaluation of academic detailing to influence pharmacists' compliance with an outpatient pharmacy partial fill policy

Rebecca Wynn, Cain Eric Kirk, Addison Ragan, Rachel Whitney
CAVA1 Central Alabama VA Health Care System

Background: In October 2018, the pharmacy department at the Central Alabama Veterans Health Care System (CAVHCS) developed an outpatient pharmacy partial fill policy limiting all partial fill medication orders to a 7-day supply. Since its development, pharmacists' compliance with the new policy has been underwhelming. The purpose of this quality improvement project is to evaluate the effectiveness of academic detailing in improving pharmacists' compliance with the current standard operating procedure. Primary and secondary objectives include change in pharmacists' compliance and change in total partial fill drug costs following the academic detailing intervention, respectively.

Methodology: Pre-intervention data included all medication partial fill orders verified by outpatient and PACT pharmacists at CAVHCS from September 8, 2019 through September 30, 2019. Academic detailing outreach visits were conducted from October 1, 2019 through October 31, 2019. Post-intervention data included all medication partial fill orders verified from November 1, 2019 through November 23, 2019. Student's t test was used to analyze the change in the day supply of partial fill medication orders following the post-intervention phase.

Results: A combined total of 36 (97.3%) CAVHCS pharmacists received an academic detailing outreach visit. Total percentage of partial fill medication orders limited to a 7-day supply or less was significantly increased following academic detailing outreach visits (84.2% post-intervention vs. 49.2% pre-intervention, p value < 0.001). Total drug costs associated with partial fill medication orders were decreased from $12,144.42 in the pre-intervention phase to $9,713.50 in the post-intervention phase.

Conclusions: Academic detailing is an effective method for improving pharmacists' compliance with an outpatient partial fill policy and lowing drug costs for the pharmacy department. Future evaluation of the outcomes over a longer time period may provide further insight into the sustainability of the effectiveness achieved through academic detailing.

Objective: Identify the impact of academic detailing towards improving pharmacists' compliance with a current outpatient pharmacy standard operating procedure.

Self Assessment Question: Can academic detailing be utilized to improve pharmacists' compliance with an outpatient pharmacy medication partial fill policy?
https://vimeo.com/409289324

2:30pm – 2:45pm B **266 - Assessing the prescribing trends of the Freestyle Libre continuous glucose monitoring system at the Salisbury Veterans Affairs Health Care System** Room B

Presenters: Linda Xiong

Assessing the prescribing trends of the Freestyle Libre continuous glucose monitoring system (CGM) at the Salisbury Veterans Affairs Health Care System

Linda Xiong, Jina Almond, Carla Hatley, Camille Robinette, Dana Yelverton

SVAM1 Salisbury/W.G. Hefner VA Medical Center

Background: The purpose of this project is to assess the prescribing trends of the Freestyle Libre CGM system at the SVAHCS based on criteria for use guidelines.

Methodology: Retrospective analysis will be conducted using electronic medical records of Veterans prescribed the Freestyle Libre CGM system at the SVAHCS from December 21, 2018-September 27, 2019. The primary outcome is to assess the prescribing trends of the Freestyle Libre CGM system based on the SVAHCS criteria for use guidelines. Secondary outcomes include: change in A1c % at 3 and 6 months after initiation of the Freestyle Libre CGM system and percentage of Veterans with baseline A1c % $\geq$ 9% has fallen below 9% after starting the Freestyle Libre CGM system. Descriptive statistics was used for data analysis.

Results: Seventy-two percent of Veterans met criteria for use. Mean A1c % was reduced post-Freestyle Libre CGM system initiation by 0.48% at three months and by 0.38% at six months. Fifty-five percent of Veterans with baseline A1c % $\geq$9% achieved A1c <9%.

Conclusions: Majority of the Veterans met criteria for use for the Freestyle Libre CGM system; reduction in A1c % was observed. Providers have been restricted in the ordering process of the Freestyle Libre CGM system to ensure consistency. Education on criteria for use guidelines should be provided to improve consistency with the prior authorization process.

Objective: Describe the prescribing trends of the Freestyle Libre CGM system at the SVAHCS based on the criteria for use guidelines.

Self-Assessment Question: What are requirements that Veterans should meet to qualify for a Freestyle Libre CGM system at the SVAHCS?

Please view my presentation here: https://www.youtube.com/watch?v=tHZdIx9i8oE

2:30pm – 2:45pm B **271 - Assessing the impact of changing from CoaguChek to Coag-Sense POCT/INR monitoring systems on anticoagulation clinic services** Room G

Presenters: Teny Joseph

Impact of the change from CoaguChek to Coag-Sense POC PT/INR monitoring systems on anticoagulation clinic services

Teny Joseph, Mary Ellen Pisano, Deanna Rattray, Valerie Southerland
Novant Health Forsyth Medical Center

Background: Traditionally Novant Health (NH) ambulatory care clinics used the Roche CoaguChek device for POC PT/INR testing. In November 2018, NH recommended discontinuing the use of CoaguChek, where possible, based on discrepancies identified in INR results at higher INR ranges, when compared to venipuncture results. Clinical evidence shows that Coag-Sense has a more favorable total allowable error performance at INR values of 2.0-3.5 and a better non-significant bias across the INR range through 4.7, when compared to CoaguChek. All NH anticoagulation services made the switch to the Coag-Sense devices by November, 2019.

Methods: This was a multi-center, retrospective chart review comparing INR data from before and after the change in POC PT/INR devices. Patients were included if they were at least 18 years of age, are on warfarin therapy for at least 3 months, continued warfarin therapy during the whole duration of study, and were managed by selected anticoagulation clinics. The primary outcome was to assess the difference in clinic level time-in-therapeutic range (TTR) following the change to Coag-sense. Anticoagulation visits were from December 2018 – February 2019 was compared to December 2019 – February 2020. Data from two NH anticoagulation sites was included in the study.

Results: A total of 100 subjects were included in this analysis. Clinic level time in therapeutic range increased for both clinics after the transition, however, the difference was not clinically significant ($p = 0.061$ and $p = 0.073$). There was a 38% decrease in the venipuncture compliance rate for post transition cohort, but the difference was not statistically significant either ($p = 0.205$). Changes in the venipuncture lab draws completed and the changes in the number of office visits were relatively even during the transition.

Conclusions: There was no statistically significant difference in the clinical and operational level workflow efficiencies following the transition to Coag-check POC PT/INR monitoring system. Further evaluation with a true active comparator and a confounding variables controlled study is warranted.

Presentation Objective: Evaluate for meaningful differences in workflow and time in therapeutic range (TTR) with the transition from CoaguCheck to Coag-sense POC PT/INR testing devices in anticoagulation clinics

Self-Assessment Question: State two key differences between Coag-Sense and CoaguCheck POC PT/INR devices.

Video Presentation: https://youtu.be/DZ8_ZuN23Kg

2:30pm – 2:45pm B **272 - Design of a Pharmacist-led Transition Care Management Pharmacotherapy Clinic** Room H

Presenters: Rebecca Clark

2:30pm – 2:45pm Y **270 - Assessment of Providersâ€™ Knowledge, Willingness, and Barriers to Utilizing Pharmacogenomic Services in Rural Community Pharmacy Settings** Room F

Presenters: Tracy Kitchens

Assessment of Providersâ€™ Knowledge, Willingness, and Barriers to Utilizing Pharmacogenomic Services in Rural Community Pharmacy Settings

Tracy Kitchens, Erin Dalton

SUSP1 South University School of Pharmacy/Richmond Hill Pharmacy

Background: Assess providersâ€™ background knowledge of pharmacogenomics, perceptions of the clinical usefulness of pharmacogenomics, perceived barriers to the implementation of pharmacogenomic services, and willingness to work with a community pharmacist to implement pharmacogenomic services in two rural community pharmacy settings.

Methodology: This prospective, survey-based research study included physicians, physician assistants, and nurse practitioners serving patients in the two rural community pharmacy settings of Richmond Hill, Georgia, and Hinesville, Georgia. The survey was sent electronically to the providers to voluntarily and anonymously complete to examine providersâ€™ perceptions in the implementation of pharmacogenomic testing services with community pharmacists.

Results: Surveys were disseminated to 37 providers and 8 participant surveys were included in the study (21.6% response rate). Only one participant had no pharmacogenomics education or experience. Majority of the providers had self-directed pharmacogenomics education and most commonly used testing company personnel as sources when interpreting pharmacogenomic test results. Seven participants agreed that collaboration with pharmacists would facilitate in the progress of pharmacogenomic services and were willing to work with a community pharmacist to implement the services. The pharmacistâ€™s role predominantly consisting of educating providers and patients on pharmacogenomics and making medication-related recommendations to providers. The most common barriers identified were lack of compensation, lack of time or resources to educate the patients, and lack of communication with pharmacists.

Conclusions: The study showed positive provider attitudes toward implementation of pharmacogenomic services with community pharmacists. Overcoming barriers and providing education on the clinical support pharmacists may provide is essential in establishing pharmacist-provider relationships and collaboration in implementing these services.

Objective: At the conclusion of this presentation, the participant will be able to identify potential barriers in the implementation of pharmacogenomic services.

Self Assessment Question: What is an area that community pharmacists can address to overcome barriers?

2:30pm – 2:45pm R **268 - Evaluation of initial fluid resuscitation in overweight critically ill adults with severe sepsis or septic shock** Room D

Evaluation of initial fluid resuscitation in overweight critically ill adults with severe sepsis or septic shock

Jiayuan Zhang, Katherine Bradley, Maria Jensen, Phong Ly, Anthony Hawkins

PPMH1 Phoebe Putney Memorial Hospital/The University of Georgia

Background: The Surviving Sepsis Campaign recommends at least 30 mL/kg of intravenous crystalloid fluid as initial management for sepsis. The dosing weight to be used hasn’t been clearly defined, yet total body weight (TBW) has been adapted into practice. The objective of this study is to evaluate if overweight patients who receive less than 30 mL/kg resuscitation fluids based on TBW have better clinical outcomes than those who received at least 30 mL/kg.

Methodology: A single-center, retrospective chart review was performed on adult patients whose TBW was at least 20% above ideal body weight and were admitted to the medical, surgical, or cardiac intensive care unit (ICU) with a diagnose of severe sepsis or septic shock. Pregnant women and patients with amputations were excluded. Patients were dichotomized for comparison based on the amount of fluids received within three hours of diagnosis: those who received at least 30 mL/kg of IV fluids per TBW and those who did not. The primary endpoint was 28-day shock-free survival. The secondary outcomes were in-hospital mortality, ICU length of stay, and 28-day mechanical ventilator-free days.

Results: In Progress

Conclusions: In Progress

Objective: compare the clinical outcomes in overweight ICU patients with severe sepsis or septic shock receiving at least 30 mL/kg versus less than 30 mL/kg total body weight resuscitation fluid.

Self Assessment Question: Does administering less than 30 mL/kg total body weight resuscitation fluid increase 28-day shock-free survival in overweight ICU patients with severe sepsis or septic shock?

2:30pm – 2:45pm G **267 - Deprescribing medications in the elderly to reduce polypharmacy at a comprehensive academic medical center** Room C

Presenters: Stella Ye

Deprescribing medications in the elderly to reduce polypharmacy at a comprehensive academic medical center.

Stella Ye, Sarah Boyko, Melissa Patel, Kruti Shah, Sara Turbow, Ugochi Ohua
GMIM2 Grady Memorial Hospital (Internal Medicine)

Background: Polypharmacy is associated with adverse drug events and medication errors. Commonly prescribed high-risk medications (HRM), as defined by Beers Criteria, include histamine-2-receptor antagonists (H2RA), proton pump inhibitors (PPI), antipsychotics, and insulin. Deprescribing, defined as evaluating the risk-benefit ratio of medications, has shown to reduce medication burden and adverse events in older adults.

Methodology: A retrospective case-control study was conducted on patients aged 65 and older admitted from April 1 - June 30, 2019. Medical-surgical patients with home medications for one or more of the following classes were included for evaluation: H2RA/PPI, antipsychotics, and/or insulin. Patients admitted to the Acute Care for the Elderly (ACE) consult service were included in the case group and patients not admitted to the ACE unit but met all other inclusion criteria served as the control group. Patients were excluded if transferred out of the ACE unit, consulted for palliative or hospice care, or died during hospitalization. The primary outcome was to evaluate differences in deprescribing defined as discontinuation, dose reduction or frequency reduction of HRM at discharge between the two groups.

Results: There were 47 and 89 patients included in the case and control groups, respectively. HRM were deprescribed in 21.5% (12/56) of cases and 25.4% (32/126) of controls. There were 19.1% (9/47) and 1.1% (1/89) of patients in the case and control groups discharged without any HRM.

Conclusions: Pharmacy involvement on an ACE unit can help identify and deprescribe select HRM that may no longer be appropriate in elderly patients.

Objective: Evaluate the involvement of a pharmacist with an ACE service on deprescribing HRM in patients aged 65 and older.

Self-Assessment Question: What are some potential barriers to deprescribing medications in hospitalized elderly adults?

MAY 9 • SATURDAY

9:00pm – 10:00pm **Please leave feedback for attended sessions!**