Downtown Dallas never saw us coming! The 64th Annual Texas Society of Health-System Pharmacists Seminar was highly successful, with attendance and participation. The event was held April 12-15 and attracted a record number of exhibits (104), posters (94), student registrants (182), total attendees (866), Alcáldé Conference residents & fellows (159) and participants in the Clinical Skills Competition (104) and Disease State Management Competitors (27).

Over 48 hours of continuing pharmacy education credit was available to choose from, and attendees could acquire nearly 18 hours during the 3-day event.

This year we trialed an exhibitor’s theater during exhibit hours, and expanded our already successful Reverse Expo program. The Residency Showcase, with 17 programs displaying for our student attendees, was another hit that continues to grow and attract participants.

An excellent dialogue was begun in the Deans’ Town Hall Meeting, focusing on the issue of hospital rotations, undergraduate and residency training and pharmacy workforce issues.

We owe a special thanks to Education Affairs Council Chair Steven Pass, Vice Chair Bob Talbert and their hard working committee, which developed the outstanding program that followed 5 tracks (students, technicians, clinical, new practitioner and pharmacy management).

This issue of this TSHP Journal is primarily devoted to providing you with information on the Poster Competition, with abstracts of those presented and a special highlight of the winners in 5 of the competition categories. We congratulate those individuals, and especially thank the TSHP R&E Foundation for their financial support, with $250 stipends going to each of the category winners, and the R&E Poster Judging Committee, including Chair Craig Frost, for the outstanding job in judging the posters. The Committee faced not only the challenge of a large number of posters to judge, but attempted to deal with a new ‘online’ submission and judging system that is part of the new TSHP membership software. Their dedication to the task is to be truly commended.

I would like to point out that 2 categories of posters failed to have any participants this year: Leadership and Technicians. This is unfortunate, and I hope that our members who have leadership insights they would like to share and our technician members would really consider taking the time to develop presentations for next year.

The Annual Seminar also gives us the opportunity to recognize outstanding members and practices through the TSHP Awards process. This year, we honored the following individuals, who were nominated by their colleagues last fall:

**Industry Service Award**

Reisor A. Pickett  
Institutional Account Director  
Astellas Pharma US., Inc.  
Boerne, TX

**Larry C. Nesmith Pharmacist**

Randy Ball, R.Ph., MBA  
Texas Health Harris Methodist Hospital  
Fort Worth, TX
<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Mike Knapp Pharmacy Technician</td>
<td>Sandy Long, PhTR, CPhT</td>
<td>Texas Health Specialty Hospital, Fort Worth, TX</td>
</tr>
<tr>
<td>New Pharmacist</td>
<td>Andy Laegeler, Pharm.D.</td>
<td>Informatics Pharmacist, Harris County Hospital District, Houston, TX</td>
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<tr>
<td>Glenda Lawson McRee Student</td>
<td>Matthew Miller</td>
<td>Texas Tech University Health Science Center, School of Pharmacy, Amarillo, TX</td>
</tr>
<tr>
<td>Pharmacy Leadership</td>
<td>Donna Burkett (Rogers), M.S., R.Ph.</td>
<td>The University of Texas at Austin, College of Pharmacy, Austin, TX</td>
</tr>
<tr>
<td>Pharmacy Mentor</td>
<td>Lance Ray, Pharm.D. BCPS</td>
<td>Texas Health Harris Methodist Hospital, Fort Worth, TX</td>
</tr>
<tr>
<td>Pharmacy Residency Excellence</td>
<td>St. Luke’s Episcopal Hospital</td>
<td>Pharmacy Practice Residency, Houston, TX</td>
</tr>
<tr>
<td>Distinguished Service Award</td>
<td>Julie A. Nelson, M.S., J.D. R.Ph.</td>
<td>Law Office of Julie Nelson, PLLC, Austin, TX</td>
</tr>
</tbody>
</table>

Nominations were not received this year for the Innovative Collaborative Practice, Lewis S. Smith or Leo F. & Ann Godley Residency Fellowship Awards.

Thanks to all our members who planned or participated in the annual seminar! On behalf of TSHP, I would also extend a special thanks to our industry partners whose support makes this event and all of the TSHP activities possible.

Please join me in sharing our tremendous appreciation to the TSHP staff for their inexhaustible work and efforts before, during and after the annual seminar. **Thanks Paul, Judy and Leah** (and Paula)!!

We hope that you were a participant in the 2012 meeting, and –whether you were or not – hope that you’ll make plans now to be at the 65th Annual Seminar, April 26-28, 2013 at the Renaissance Hotel in Austin.

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**Brian Cohen**

TSHP President
SAVE THE DATE

TSHP 2013 Annual Seminar
April 26 - 28
Renaissance Austin Hotel
Austin, Texas
Texas Legislative Primary Election Update

The long-delayed election came, but nobody noticed... It appears that sometimes the noise can get so loud that you can’t hear it any more. After what seemed to be endless political campaigning both on the local and national levels – only 9% of the eligible voters in Texas bothered to vote in either the republican or democratic primaries. That means that 91% of the voters in Texas stayed home.

The state redistricting process is always political warfare, but this year the legal challenges by both political parties delayed the traditional March primary elections until May 29. That meant that the candidates had longer to wait to see what the maps looked like and to consider their options, and the final result was that more candidates decided to run and the campaigns lasted 2 months longer. Considering that the republican presidential nomination process has lasted over a year with endless debates and at least a half-dozen frontrunners no longer in the race..... You’d think that the voting public would have been fired up and ready to vote !!!

Texas has almost 19 million eligible voters. 1.4 million people (7%) voted in the republican primary and only 555,000 people (2%) voted in the democratic primary. I’m sure the experts will do an analysis of exactly who those voters were; conservatives, tea partiers, environmentalists, party faithful, but from what I could see... it was the angry people. The democrat turnout seemed to be the loyal regulars and the results seemed to support the current officeholders and incumbents. But on the republican side – it was the opposite. It appears that only those who were truly angry showed up. Those who were angry at Congress, angry at the economy, angry at all incumbents came to make a statement, and their protest resulted in numerous surprise outcomes. Seven current legislators were ousted from office, and most were just the victim of being the person in-office.

Becoming more like Washington and less like Texas... For the longest time we were proud to say that we were different than Washington. They were the partisan politicians who couldn’t get along, couldn’t get anything done because to compromise was allowing the other side to get some credit for accomplishing something. Here in Texas, legislators from both sides worked to resolve issues and bi-partisanship was something that worked. George W. Bush was openly supported by democrat officeholders when he was Governor, and the current Speaker of the House Joe Straus was elected by a coalition of republicans and democrats. Those days are over and the penalty of ineffective government may have to be paid in the difficult times ahead. Our elected officials are more polarized than ever. Republicans are criticizing other republicans who are willing to work with democrats to find middle ground and the word “compromise” has become a character flaw. “To compromise” used to mean finding negotiated solutions for problems, today it is said that you are “compromising your principals.”

Where did all the elder-statesmen go?... The trend continues. Two years ago the impact of the “Tea Party” voter and the ugly town hall meetings resulted in a substantial turnover in the Texas House of Representatives. There were 36 new members, a 24% turnover. This year the Tea Party voters teamed up with the angry fiscal conservatives and it looks like we could see 42 new legislators after the general elections this fall. That would mean that close to 50% of the House of Representatives would have one legislative session
or less experience. That’s a lot of inexperienced legislators trying to learn the process and a big loss of institutional memory for important issues like school finance and government appropriations. Fully 1/3 of all of the committee chairmanships will be vacant.

Turnover in the Texas Senate will also be significant. There will be 4-6 new Senators next Session, depending on the results of a run-off and the general election, which is unusually high. And if the current Lt. Governor, David Dewhurst wins his race for U.S. Senator, then there will be a new presiding officer selected from among the remaining senators. This kind of turnover will result in new leaders and committee chairmanships which always slow down the pace of progress during the already brief 5 month legislative sessions.

BTW, who really runs the show when there is a void in the leadership and a lack of experience in the legislature? Those crafty lobbyists and association folks will often offer good sounding solutions to problems….. I’m just saying.

So who lost their race for re-election?...

There were a few surprises on election night:

- Rep. Leo Berman (R-Tyler) had served in the legislature for 14 years. He was defeated by a young man who is self-employed and serves in the Navy Reserve.
- Rep. Wayne Christian (R-Center) had served in the legislature for 14 years and lost to a young radio talk show host who is also the Mayor of Marshall, Texas.
- Rep. Rob Eissler (R-The Woodlands) served in the legislature for 10 years and currently serves as the Chairman of the House Public Education Committee. He was defeated by a tea party candidate who owns a pool design company.
- Rep. Tuffy Hamilton (R-Lumberton) served in the legislature for 8 years and served as Chairman of the House Licensing Committee. In the redistricting process he was “paired” with and defeated by freshman legislator Rep. James White (R-Hillister).
- Rep. Marva Beck (R-Centerville) served in the legislature for just 2 years and was defeated by the president of the Lufkin School Board.
- Rep. Barbara Nash (R-Arlington) served in the legislature for 2 years and was defeated by a young attorney.
- Rep. Vicki Truitt (R-Keller) served in the legislature for 14 years and served as Chairwoman of the House Pensions and Investments Committee. She was defeated by a young small businessman who has never held public office.

A Case Study – Why did Rob Eissler Lose?...

To understand what is happening within the Republican Party and in Texas politics in general, we can look at one race for clues. Rob Eissler was the kind of legislator you were really excited to know….. everyone liked him. He was crazy smart and was known for his “Puns and Quips” during debate on the House floor. Rob is a decorated Navy Pilot, Princeton University graduate, a local school board president, president of the local rotary club, honored as “citizen of the year” by the local chamber of commerce, a 20 year youth sports coach, and the radio broadcaster for the high school football team. Rob served as the Chairman of the House Public Education Committee during the school finance crisis and as a result was named one of the “Top 10 Best Legislators” by Texas Monthly magazine. How does a guy like this get beat – by a little known tea party activist?

Well…. I can just envision the day Rob arrived home from the last legislative session in Austin. I can see Rob driving down main street to a big reception planned for him….. On one side of the street were angry constituents who knew he was the chairman of the education committee and blamed him personally for a decision to cut public education funding even though the state was trying to solve a $27 billion deficit. On the other side of the street was an angrier mob that saw Congress’s out of control spending and blamed Rob for spending too much on programs like education. At the end of the block were a crowd who were mad at him for negotiating with the democrats to solve problems, and then there were those who were just mad at him because he was the incumbent.

Politics and campaigns today are a contact sport. Civility doesn’t matter and neither do the facts. It is true that we get the government we deserve, but someone needs to wake us up before we lose the precious gift we have been given. When only 9% of the people who live in a community bother to exercise their obligation to VOTE, then it is likely that things will turn out like they did.
The Outcome of Restricted Access to Topical Thrombin in the Surgery Department
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Christus Santa Rosa Health Care
City Centre, San Antonio, TX
Not previously presented

Background – Topical thrombin has a long history of use as a hemostatic agent in the surgical setting. Topical thrombin is available at CHRISTUS Santa Rosa Hospital (CSRH) as bovine thrombin in 20,000 unit and 5,000 unit kits. These bovine formulations are supplied by the pharmacy department through an automated dispensing machine. In order to promote more judicious use of thrombin, the 20,000 unit kit was removed from the automated dispensing machine in May 2011. The 20,000 unit kit was then secured within the satellite pharmacy located in the surgery department. Access was restricted only to pharmacy personnel and dispensed upon request to the surgery staff.

Objective(s) – To evaluate how restricted access to topical thrombin 20,000 units affected overall thrombin usage in the surgical setting. To evaluate how this change in thrombin availability translated into cost savings to the pharmacy department.

Method(s) – Thrombin usage was evaluated retrospectively from 1/1/2011-12/31/2011. Purchase history was compiled from invoices from 1/1/2011-12/31/2011 and from 1/1/2010-12/31/2010.

Result(s) – Overall, surgery thrombin usage decreased when access to the 20,000 unit kit was restricted. When comparing the quantity of thrombin 20,000 unit kits purchased in 2011 to the quantity purchased in 2010, a cost savings of approximately $33,000 was identified.

Conclusion(s) – Relocation of thrombin 20,000 unit kits from an automated dispensing machine to secured satellite pharmacy decreased usage.

Disclosure(s) – No disclosures.

Click Here to View the Poster
Development and Implementation of a Pharmacotherapy Clinic within a Private Hospital System
JS Gee and A Rodriguez
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San Antonio, TX
Clinical
Not previously presented

Background: As healthcare organizations shift to focus on preventative medicine, physicians are becoming involved in a multi-disciplinary approach to patient care by working with pharmacists, dietitians, and nurses. The addition of pharmacists in the primary care clinic to manage chronic disease states has been shown to improve clinical outcomes and decrease costs. Private health care organizations find it difficult to financially justify a pharmacist in the clinic, since it is challenging to generate a profit based on current reimbursement standards for pharmacists. As a result, primary care pharmacists are limited to Veterans Affairs hospitals, county institutions, and academic medical centers where the focus is on cost savings. However, more opportunities in private hospital clinics may become available through joint-funded faculty positions with colleges of pharmacy.

Objective: To describe the development and implementation of a pharmacotherapy clinic within a private hospital system.

Methods: Clinical service development was comprised of developing a collaborative practice agreement, referral process, billing method, and an efficient clinic visit workflow.

Results: Potential barriers may be encountered during clinical service implementation. However, they may be overcome through the education of physicians and clinic administration on the role of the pharmacist in the clinic.

Conclusions: Private health care organizations can improve clinical outcomes with pharmacotherapy clinics. In order to overcome challenges that may arise when establishing a clinic, it is imperative that the pharmacist ensure open communication with all involved in clinic development and initiate contact with clinic providers to establish a strong professional relationship.

Disclosure(s): The authors have nothing to disclose.
IPPE-II course for AY 2012 was designed to use videos, standardized patients (SP’s) and assessment rubrics with SP simulation to train the students in ambulatory patient screening skills for Health Fair events and to assess their performance.

Objective: To evaluate the effectiveness of SP’s to teach and assess patient screening skills for PharmD Candidates and to determine assessment consistency between SP groups at the Amarillo and Abilene campuses.

Methodology: Assessment rubric scores were summarized into data tables blinded for the Candidate and evaluating SP identities. Individual and composite SP scores were calculated for mean and standard deviation. Mean scores for each SP were compared to the mean for the composite SP scores to determine if there was consistency in individual and group SP scores.

Results: Most individual SP score averages were within the first deviation of the composite mean with no significant statistical difference in scores between the Amarillo and Abilene SP groups.

Discussion: Major study limitations are: 1) no faculty validation of the SP scores and comparison of faculty to SP scores and 2) separate SP training sessions for the Amarillo and Abilene campuses.

Conclusion: The use of SP’s and simulation to teach and evaluate Candidates’ patient screening skills in IPP-II is considered effective and is recommended to continue with improvements for Academic Year 2012-13.

Disclosure: Neither of the authors have any conflict of interest to disclose.
Validation of clinical pre-test probability predictor (4T’s) with heparin-induced platelet test panel including screening test (anti-heparin: PF4 ELISA assay) and routine confirmatory assay (serotonin release assay) for early diagnosis of heparin-induced thrombocytopenia

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Not previously presented

Background: Early diagnosis of heparin-induced thrombocytopenia (HIT) is challenging given the lack of specificity of anti-heparin/PF4 assays (ELISA), extended turn over time for serotonin release assay (SRA) results and inconsistent utilization of clinical pre-test 4T’s scores.

Objectives: The objectives are to evaluate the correlation between the 4T’s score and optical density (OD) values with positive SRA, thrombosis, and mortality.

Method(s): This is a retrospective chart review of 105 patients with suspected HIT and had OD values ≥ 0.4 and SRA ordered during hospitalization. OD values were categorized (0.4-1, 1-1.4, 1.4-2, and ≥ 2) and 4T’s were calculated. Positive SRA is considered to be a definitive diagnosis for HIT.

Results: Patients with increasing OD values correlate with intermediate and high 4T’s scores as a positive predictor for positive SRA while low 4T’s score is a strong negative predictor for SRA. Twelve (83.3%) patients identified with OD > 1 and high 4Ts score tested positive for SRA while 35 (100%) patients with OD > 0.4 and low 4T’s score tested negative. Thrombosis was significantly higher in patients with positive SRA (50% vs. 25.9%, p= 0.047). Of the twenty four patients who tested positive for SRA, the combination of OD > 1 and high 4T’s scores were better predictors for thrombosis. None of the evaluated predictive factors correlate with mortality.

Conclusions: Increasing ELISA optical density values and higher 4T’s scores correlates with higher likelihood of positive SRA and thrombosis and may have clinical value in early diagnosis of HIT.

Disclosures: W Wei, KS Putney, AJ Chen, AW Bracey, RW Yau, M Bayat all have nothing to disclose.
Background: The incidence of cervical cancer is much lower in the United States due to increased access to preventative measures. However, health disparities have been identified with Hispanic and African-American women being 50% and 30% more likely to be diagnosed with cervical cancer and at increased risk from dying from their disease when compared to Caucasian women. Harris County, with nearly 33% of its patient population uninsured, has greater increases in cervical cancer incidence among Hispanic and African-American women.

Objective: The primary purpose is to determine the rates of cervical cancer diagnosis and staging among women in the Harris County Hospital District (HCHD) based on age, race, and screening efforts.

Methods: This retrospective study evaluated all women who were treated for cervical cancer at HCHD in the Gynecology Oncology Clinic at Ben Taub General Hospital (BTGH) between 2000 and 2011. Data collection included demographics, cervical cancer risk factors, histopathology, and cancer diagnosis and treatment.

Results: 68% of women treated at BTGH for cervical cancer had not received any screening prior to their diagnosis. Of these women, the majority were diagnosed with cervical cancer staged IB2 or greater.

Conclusions: The majority of patients in the HCHD do not receive proper screening for cervical cancer. As a result, cervical cancer in these women is diagnosed at later stages leading to more complex treatments and poor outcomes. Future focuses on prevention with vaccinations as well as increased screening efforts may prevent these alarming rates of cervical cancer in this underinsured/uninsured population.

Disclosures: None.
A-2 Use of a Clinical Surveillance System to Improve Clinical Intervention Documentation in a 425-bed Acute Care Community Hospital
S Calloway, H Akilo, K Bierman, B Osburg
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Good Shepherd Medical Center, Longview, TX
Not previously presented

Background: Good Shepherd Medical Center (GSMC) is a 425-bed acute care community hospital. The pharmacy department uses a decentralized model with seven pharmacists on site, two remote pharmacists, and two night pharmacists. In 2011, GSMC began using the TheraDoc™ Clinical Surveillance system to document clinical interventions, follow drug consults, and document adverse drug reactions. TheraDoc’s Clinical Intelligence™ Platform enables enhanced and efficient clinical decision-making in real time.

Objectives: To determine the impact of TheraDoc on patient safety through pharmacy-focused interventions and to ascertain its economic impact.

Method(s): All pharmacists participated in educational programs. Department standards were redeveloped to add the pharmacists’ clinical intervention documentation as a metric of their yearly evaluation. Intervention worksheets were developed to allow easy lookup of common interventions. The clinical director met individually with pharmacists to discuss interventions, addressed interventions in the pharmacy newsletter and spotlighted pharmacists who were diligent in their documentation.

Conclusion: GSMC has demonstrated increases in clinical interventions and cost savings through implementation of TheraDoc. Funding has been approved for a plan to further enhance pharmacists’ ability to use TheraDoc on daily multidisciplinary rounds to access patient data and document interventions. With the continued demonstration of value by the department of pharmacy, an additional full time employee has been approved for a clinical position.

Disclosure(s) – None

A-3 Developing a Pharmacy Comprehensive Practice Model
JR Maddock, J Samuel
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Memorial Hermann Hospital TMC, Houston, Texas
Not previously presented

Background: Health care reform, Computerized Prescriber Order Entry and the ASHP PPMI have encouraged evolution of the pharmacy practice model that supports the most effective use of pharmacists as direct patient care providers. Traditional pharmacy distribution models requiring that the pharmacist be in one place to verify orders have been a barrier to
this evolution.

Objective: To describe the process that one hospital implemented to move from a “specialist” pharmacy model to a “comprehensive” pharmacy model.

Method: The department went through a change management process including presentations by senior management outlining the need to move to the new model. New roles / responsibilities were identified for the integrated pharmacists. A staff “matching” process similar to the ASHP residency matching process was carried out. A training and competency assessment program was developed. The implementation of the comprehensive model was rolled out to coincide with the implementation of the hospital’s computerized prescriber order entry initiative.

Results: Seventeen pharmacists were transitioned from a traditional centralized staff model to a decentralized integrated clinical model, complementing the existing twenty clinical specialists.

Conclusion: Evolving to a comprehensive pharmacy model has led to an increase in clinical pharmacy services across the organization, an increase in pharmacist satisfaction as well as physician and nurse satisfaction with pharmacy services.

Disclosure(s): The authors do not have anything to disclose

Sunny Ogbonnaya

Objectives: To improve physician compliance up to 100%. To identify provider-specialty opportunities To provide education on how to perform medication reconciliation.

Method: Using available infrastructure, a section of the pharmacy work area was designated. Dedicated telephone line was installed. For a two-week period beginning October 3, 2011, pharmacy interns and technicians were assigned to review all new admission records from the previous night, determine evidence of medication reconciliation completion of medication reconciliation within 24 hours of admission. If there was no evidence of completion, support personnel called the admitting physician, and advised of the need for completion. Some physicians expressed lack of knowledge in navigating the system to enable completion. Support personnel provided a step-wise education/overview on how to successfully complete the reconciliation process. Response time and frequency of notification of the provider were recorded. A record of all interactions with the provider was maintained. A report generated and made available to administration. Compliance rate reviewed at the end of the week by administration.

Results: Average response time from paging was 5 minutes. 50% of the physicians responded within one page. 99% of the physicians were receptive and responded to calls.

Conclusion: The pilot demonstrated positive compliance benefit. There was improvement from pre-pilot period (72% - 89%). We hope to determine whether the program results are transferable to other locations, and will recommend implementation at additional sites with adjustments to the findings in order to compensate for other identified variables. Sustainability of compliance rate increase is also yet to be determined over time.

A-5 Implementation of In-House Overnight Prescription Processing Service to Improve Patient Care and Turn-Around/Wait Times in a County Hospital System
Sunny Ogbonnaya

Objectives: To improve the continuum of care by implementing an in-house overnight prescription service to ensure that take home medications are ready for pick up at time of discharge. To improve turnaround time of call-in prescription refills from 3 days to 1 day, and to decrease patient wait times at pick by 30%. To gain operational efficiency by re-distribution of prescription workload, for enhanced clinical services. To improve patient satisfaction.
Method: Using workflow re-design, we demonstrated a useful model by identifying essential aspects that can impact the discharge process and turn-around/wait time outcomes. For 3 months beginning August 1, 2011, current employees were re-allocated to staff the in-house overnight prescription processing service. All prescriptions are reviewed, and problems resolved by designated staff within the day time hours, including re-ordering for next early morning delivery. Any identified issue that may prevent readiness is communicated to patient within the same day prior to the beginning of the overnight shift. Overnight staff focuses on ensuring that all prescriptions are ready for pick up at 7:00am. The program offers patients a ten-minute wait time at pick up. Wait times were measured using a line management system. All participating patients are given 5-question satisfaction survey to evaluate the service.

Results: About 25% of our prescriptions were processed, using this service. Wait time was significantly lower, than that of those prescriptions not filled utilizing the service. Outsourcing was eliminated. Turn around time was reduced by 66%

Conclusions: The pilot demonstrated an improved timeliness of patient wait times at discharge and pick up, benefiting bed management and enhanced patient care. There was significant reduction in number of prescriptions returned to stock, three-month pilot period consecutively.

A-6 Implementation of a Surveillance Program to Detect Variances in Nursing Medication Administration
CN Williams, T Roberts
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St. Joseph Regional Health Center, Bryan, Texas.
Not previously presented

Background: Pharmacy reconciliation of nursing administration of medications is required by the Texas State Board of Pharmacy. A process was developed to enhance monitoring and reporting of this requirement.

Objective: To describe the implementation of a surveillance program to detect nursing medication administration variances related to removals from automated medication dispensing cabinets and barcode scan verification of medication administration.

Method: In 2011, The Pharmacy Department implemented a process to review reports from the automation system that would provide detail on medication access variances concerning patient barcode recognition (i.e. patient not scanned), medication barcode recognition (i.e. medication not scanned), dose documentation (i.e. incorrect dose documented), and waste documentation (i.e. waste incomplete). Reports were reviewed for discrepancies and nursing directors were contacted to provide a resolution of any issues. If a response to each discrepancy was not provided within twenty-four hours, the report was forwarded to the chief nursing officer.

Results: From April to December 2011, the following outcomes were documented- Incidents of Patients Not Scanned decreased by 81%; Incidents of Med Not Scanned decreased from by 64%; Incorrect Dose Documented decreased by 42%; Waste Incomplete variances decreased by 67%.

Conclusion: Routine surveillance of variance in medication administration of medications dispensed via automation has resulted in more consistent medication administration and enhanced patient care.

Disclosures: None to disclose

A-7 Pharmacy Billing Reconciliation in the Critical Access Hospital Emergency Department
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St. Joseph Regional Health Center, Bryan, Texas.
Not previously presented
Background: St. Joseph Health System, located in Bryan, Texas, has three Critical Access Hospitals, which include Burleson St. Joseph Health Center in Caldwell, Texas and Madison St. Joseph Health Center in Madisonville, Texas. The faith-based, not-for-profit, St. Joseph Health System is a part of Sylvania Franciscan Health. 80% of emergency department medications are stored within automation at the Madison campus; 95% of emergency department medications are stored within automation at the Burleson campus.

Objective: To determine if variances in medication access, separate from automation, in the emergency department (ED) actually translates into loss of revenue due to loss of charge capture.

Method: A process was designed to review patients and charges. A difference in the charges is determined to be lost revenue unless the billing record can be modified prior to final submission for reimbursement. An assessment was done per month to reflect the total charges submitted minus the amount that would have been lost. The review is ongoing.

Results: From January to February, pharmacy charge capture activities in the emergency department generated $33,199 and $34,779 respectively, for Madisonville St. Joseph Health Center; $2,055 and $2,423 respectively for Burleson-St. Joseph Health Center.

Conclusion: Critical Access Hospital emergency departments with higher percentages of pharmacy inventory stored within automation had a significantly reduced potential for lost charges and the capability of charge capture was enhanced.

A-8 Collaboration of Pharmacy, Nursing and Medical Staff Increases Accuracy in Pharmacist Order Entry and Decreases the Need for Physician Clarifications

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St. Joseph Regional Health Center, Bryan, Texas.
Not previously presented

Background: St. Joseph Regional Health Center is a faith-based, not-for-profit, hospital and the anchor facility for the St. Joseph Health System, based in Bryan, Texas. Pharmacist medication order processing times (turnaround) were reviewed with focus on contributing factors causing inaccuracies and delays in pharmacist order entry and nursing access to medications.

Objectives: To improve pharmacist order entry accuracy, decrease order entry discrepancies, decrease delays in pharmacist order entry, and decrease prescriber variances requiring clarifications.

Methods: Data was collected to determine the monthly average telephone traffic to the pharmacy department, volume of nursing “holds” regarding medication administration, and prescriber variances that require pharmacist-physician clarifications. Changes were made to processes to improve in these areas.

Results: Telephone calls decreased by 91%, from 270 calls in 24 hours to 24 calls in 24 hours.
Pharmacist order entry discrepancies (nursing holds prior to medication administration) decreased 51%, from 2.08/1000 to 1.02/1000. Physician medication order variances decreased 31%, from 65 orders pending clarification to 45 orders pending clarification, month over month, respectively.

Conclusion: Collaboration of pharmacy, nursing and physicians fostered measureable process improvements in increased pharmacist order entry accuracy, decreased holds on nursing medication administration, and decreased pharmacist-physician clarifications pertaining to prescriber variances. The joint efforts of the multidisciplinary team produced enhancements in patient care and pharmacy practice.

Disclosures: None.
C-1 Implementation of a Specialized Pharmacy Team for Overseeing High Risk Medications during Transition from Hospital to Discharge
ES Martin, RL Overstreet, LR Jackson-Khalil, PA Meyer
emartin@swmail.sw.org
Scott and White Memorial Hospital, Temple, Texas
Not previously presented

Background: Medication therapy management at the time of hospital discharge is a complex process with significant risk for error and miscommunication.

Objectives: The development and implementation of a specialized pharmacy team to ensure patient safety during transition from hospital to discharge, with the focus on high-risk medications.

Methods: Reports of patients on high-risk medications (HRMs) were used to identify the team’s targeted patients. HRMs included selected anticoagulants, antiarrhythmics, anticonvulsants, etc. As discharge orders containing HRMs were identified, the high-risk medication team (HRMT) reviewed these orders for omission of critical-safety medications, appropriate monitoring and follow-up, potential medication counseling, and overall appropriateness of medication regimen.

Results: A total of 5,138 discharge order sets were reviewed in the first six months of implementation. HRMT made 1,932 contacts with patients and healthcare providers from inpatient and outpatient setting. The team successfully intervened on 42 omissions of safety-critical medications (primary interventions). Additionally, 208 secondary interventions were performed. The rate of total medication errors discovered at discharge identified was 217/5138, or 4.2%. Patients were counseled on the following prescriptions: clopidogrel/prasugrel (n=237), warfarin (n=156). The HRMT continued to show growth in the latter half of 2011, with 321 accepted clinical interventions, 240 cases of preventing missing or additional medication, and 120 successful interventions on medication dose discrepancy.

Conclusions: The specialized team successfully incorporated the pharmacy service and the hospital system, with improved patient care and medication safety. This service highlights the benefit of having clinical pharmacists partner with prescribers in developing discharge medication regimens for high-risk patients.

Disclosure(s): No conflicts of interest to disclose by any authors

C-2 Implementation, Safety and Efficacy of a Nurse Adjusted Insulin Drip Protocol in Critically Ill Patients
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jtconstable@tmhs.org
San Jacinto Methodist Hospital, Baytown, TX
Not previously presented

Background: Efficient treatment of hyperglycemia in surgical and critically ill patients is an important factor in reducing morbidity, mortality, and cost. Literature suggests a blood glucose (BG) goal between 140-180 mg/dL may result in lower mortality while also preventing hypoglycemia.

Objective: To develop, implement, and monitor a nurse adjusted insulin drip protocol to achieve a consistent blood glucose reading between 140-180 mg/dL.

Methods: An insulin drip protocol modeled after the algorithm of Davidson et al. was implemented. The protocol includes an infusion rate adjustment chart intended to alleviate computation errors. All ICU, IMCU and ED nurses received education from a clinical pharmacist prior to implementation. Data was collected retrospectively to monitor for safety and efficacy.

Results: A total of 51 patients were reviewed. Five patients with incorrect rate adjustments and 3 patients with an alterna-
tive BG target range were excluded from efficacy data. Forty three patients with a target BG range of 140-180 mg/dL had an average BG of 123 mg/dL and 131 mg/dL over the last 3 and 6 hours on the insulin drip, respectively. Only 3 episodes of BG < 70 mg/dL occurred with no instances of BG < 40 mg/dL within all patients. Precise utilization of the protocol occurred 3 months after initiation.

Conclusion: The use of an insulin rate adjustment protocol provided steady blood glucose control with few occurrences of hypoglycemia. Future modifications include reevaluating the rate adjustment chart to prevent blood glucose from falling below target range.

Disclosure(s): Nothing to disclose.

C-3 Reducing the use of heparinized saline in maintaining IV line patency
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Not previously presented

Background: Most institutions either use heparinized saline or saline to maintain IV line patency. Currently, the institution uses heparinized saline as our standard in maintaining IV line patency. Heparinized saline is not reviewed by Pharmacy for contraindications. In addition, there have case reports linking heparinized saline used for maintaining IV line patency to heparin-induced thrombocytopenia.

Objective: The objective was to reduce the amount of heparinized saline by 99% in maintaining IV line patency by July 31st, 2011 in our stem cell population

Methods: We utilized Plan, Do, Study, Act methodology to decrease the use of heparinized saline. We mapped our process on how IV line patency is maintained with heparinized saline. We then developed a cause and effect diagram of the issues with our current processes. We led a multi-disciplinary team from our inpatient stem cell transplant service to institute a pilot to utilize saline flush to maintain IV line patency.

Results: Before the pilot began, the unit utilized around 2400 syringes of heparinized saline per month. From February 2011 to July 2011, the use of heparinized saline decreased to 12 syringes/month. In addition, we saved the unit around $1400 in drug costs by using saline only during the study period.

Conclusion: We successfully decreased the use of heparinized saline by 99% in our stem cell population. We are currently in the process of changing our standard of care in maintaining IV line patency to saline only in our inpatient patient population that could generate a yearly drug cost savings of $13,000.

C-5 Pharmacist Interventions: Beyond Drug Dispensing AUTHORS: C A Dedman, I G Ratsaphangthong, S E Knight
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Methodist Dallas Medical Center Annual Quality Summit, 2011

Background: Medical errors surpass the eighth leading cause of death each year in the United States and account for approximately $17-29 billion in annual healthcare spending. Mishaps related to medication management are a major contributor to medical errors in the hospital setting. Major complications and comorbidities associated with poisoning and toxic effects of drugs is the diagnosis-related group (DRG) ranked 10th by Medicare as having the highest opportunity for cost reduction. Daily employee activities target optimizing safe and effective use of medications. MDMC pharmacists proactively participate in optimizing medication management of patients admitted throughout the hospital by preventing adverse events through order clarifications, providing pharmacokinetic consults, encouraging judicious use of antimicrobial
therapies, guiding appropriate use of prescribed therapies, recommending discontinuation of extraneous therapies, and educating patients and caregivers.

Methods: Pharmacists voluntarily document interventions in the MDMC medication order entry system, Meditech®. Interventions are categorized by the type of activity. Information related to the specific medication(s) involved, the provider response, and the amount of time dedicated to resolving the issue may also exist in the report. Each intervention category is associated with a dollar amount corresponding with nationally benchmarked values representing cost avoidance. Thomson Healthcare Solucient Benchmark values were used when assigning these values. Meditech interventions documented between January 2010 and January 2011 were reviewed to identify the specific economic and clinical contributions made by MDMC pharmacists.

Results: Pharmacists documented and completed a total of 23,228 interventions over a 13 month period, or approximately 1,785 interventions per month. Fifty percent of these interventions involved clarifying drug orders, recommending dose adjustments, and performing pharmacokinetic consult activities. The total amount of time devoted to these interventions was 450,480 minutes, averaging about 20 minutes per intervention. Annual cost avoidance, or savings, of $3,452,066 was expected by MDMC through direct pharmacist participation in the day-to-day care of patients.

Conclusions: MDMC pharmacists are actively involved in optimizing patient healthcare through various clinical and operational activities related to medication management. Pharmacist activities contributed to well over $3 million in annual cost savings. Pharmacy department leadership will continue to identify methods to improve the consistency and efficiency of documentation of pharmacy frontline staff contributions through a more detailed analysis of specific intervention categories.

Disclosures: The authors have no disclosures.

C-6 Outcomes From Selzentry Use Evaluation In A Large Urban Indigent HIV Clinic
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Background: Selzentry is the first and only CCR5 co-receptor antagonist approved by the US Food and Drug Administration indicated in combination with other antiretroviral agents for the treatment of both treatment-naïve and treatment-experienced CCR5 tropic HIV-1 infected adult. Selzentry is a substrate of CYP 3A and therefore, its pharmacokinetics is likely to be modulated by inhibitors and inducers of these enzymes. Dose adjustment of Selzentry is necessary when administered with concomitant CYP 3A inhibitors and/or inducers.

Objectives: Primary objective were to check correct utilization of Selzentry in terms of Tropism testing and dose adjustment, and secondary objectives were to assess virologic and immunologic response at six months

Methods: Included all clients who received Selzentry for at least six months between January 2008 and May 2011 at Thomas Street Clinic. Information collected included Tropism results, baseline and six months HIV viral load, CD4 counts, Selzentry dose, concomitant antiviral antiretroviral agents, and chemistries.

Results: 19/21 (90.5%) subjects evaluated had a documented tropism testing prior to Selzentry initiation. The majority of the subjects 18/21 (85.7%) were dosed correctly; one patient was initiated on Selzentry despite test results consistent with a dual/mixed tropism. All the subjects were antiretroviral experienced by the time the new regimen that included Selzentry was initiated; of these 14/21 (66%) achieved or sustained viral load suppression (<48 copies/mL); 4/14 were already virologic suppressed. The mean CD4 count increase was 108 cells/mm3.

Conclusion: Majority of the subjects had tropism checked and dose adjusted before initiation of Selzentry in Houston AIDS clinic.
EDUCATION CATEGORY

E-1 Incorporating Pharmacy Interns into a Medical Mission Trip.
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Background: University of the Incarnate Word is a faith based institution. A need existed to incorporate students into medical mission trips.

Objective: Provide opportunities for pharmacy interns to provide pharmacy services as a member of an interdisciplinary medical mission team.

Methods: A meeting with a local chapter of a national medical mission organization was held to discuss the feasibility of pharmacy interns working with physicians, dentists, nurses, and health profession students. Two medical mission electives were developed. The first consists of didactic education (lecture: philosophy and history of missions, mission message, world religions, best practices; student presentations: individual – spiritual journey, group – country profile; written assignments: reflections, spiritual encounters; project) and serves as a pre-requisite for the medical mission trip. The second, mission trip, consists of pre-trip planning (familiarization of medical teams and services, culture, region served, inventory, packaging medications), delivery of pharmacy services (dispensing, counseling, immunizations, interventions, recommendations) during the trip, and post-trip analysis (reflection, improvement recommendations).

Results: Seven P3 students participated in the initial offering of both courses. Students and medical personnel provided positive evaluations. All students performed above 90 percent in both courses. All students indicated a desire to participate in medical missions as a pharmacist.

Conclusions: Both electives will be offered for both semesters next year for P3 students. The didactic pre-requisite will remain. Improvement recommendations will be forwarded to the organization for implementation evaluation. Future plans include using past course participants as preceptors and expanding mission opportunities.

Disclosure: Faculty – University of the Incarnate Word

E-2 Creation of CARE Packages for Training Pharmacy Students
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Not previously presented

Background: Students typically rotate through several practice sites for experiential education. A significant amount of time is spent unproductively in orientation and becoming familiar with people, processes, policies, and procedures which limit contributions to organizations, particularly health systems.

Objective: Place students at the same health system for their IPPE (Introductory Pharmacy Practice Experience) and most of their APPEs (Advanced Pharmacy Practice Experience) to optimize student learning over time and increase the service return to the organization.

Methods: CARE packages (Customized And Reserved Experiences) were designed with Baptist Health System and presented to P3 students. These included the following: IPPE hospital; APPE hospital, acute care, ambulatory care, and two electives (pediatrics, medication safety/ regulatory affairs/informatics, infectious diseases, critical care, TDM and TPN consult service). The health system interviewed interested students. Those that were selected and accepted the offer were removed from
the match for assignments, except for APPE community.

Results: Nine CARE packages were created; 6 at North Central Baptist Hospital and 3 at Baptist Medical Center. Ten students were interviewed and deemed to be good candidates by the health system. Eight students accepted the offer and were enrolled in the training program. They begin in May 2012 with IPPE hospital. They will be trained in all aspects of the pharmacy operations and clinical services with the hope of retaining some in resident or pharmacist positions after graduation.

Conclusions: Students were interested in this opportunity, and demand may grow in the future if it is successful.

Disclosure: The authors have nothing to disclose.

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**RESIDENT CATEGORY**

R-1 Clinical Outcomes of Prolonged-Infusion Piperacillin/Tazobactam in Patients Admitted to the Intensive Care Unit
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Not Previously Presented

Background: Maximal bactericidal activity for piperacillin/tazobactam (PTZ) is achieved when the free, non-protein bound serum drug concentrations remain above minimum inhibitory concentrations for 50% of the dosing interval. Dosing based on traditional-infusion (TI) times has not been able to achieve this pharmacodynamic parameter. Prolonging the infusion time to 4 hours has shown a higher probability of target attainment with lower total daily doses.

Objectives: Evaluate the potential mortality benefits associated with the use of prolonged-infusion (PI-PTZ) regimens in patients admitted to the intensive care unit.

Method(s) or Procedure(s): This IRB approved, retrospective cohort study will compare mortality data from patients who received TI-PTZ regimens with those patients who received PI-PTZ regimens after implementation of a hospital-wide automatic dose optimization protocol. Assuming a baseline mortality rate of 20% in the TI-PTZ cohort and a two-sided alpha level of 0.05, total of 400 patients (200 per cohort) are required to provide a statistical power of 80% in order to detect an absolute difference in mortality of 10%. The primary endpoint is in-hospital mortality.

Preliminary Result(s): A total of 100 patients (50 per cohort) have been included. The current number of patients only represents 25% of the total population required to adequately power the study for statistical analysis. Based on these numbers, the raw data suggests a 6% reduction in in-hospital mortality with PI-PTZ.

Conclusions(s): More patients need to be evaluated in order to determine if the reduction in mortality remains valid with PI-PTZ.

Disclosure(s): The authors do not have any disclosures.

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R-2 Assessment of the appropriate prophylactic dose of enoxaparin for underweight patients
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Not previously presented

Background: The vast usage of LMWHs for anticoagulation is due to its predictability of effect which renders laboratory monitoring unessential for most patients. However, in special populations such as patients with body weight extremes,
pregnancy, and renal insufficiency, monitoring is recommended. Currently at St. Luke’s Episcopal Hospital (SLEH) underweight patients receive standard prophylactic doses depending on renal function. Monitoring of anti-Xa levels is done for patients at high risk for hemorrhagic episodes including those < 45 kg. The appropriateness of the standard prophylactic dose in underweight patients is unknown.

Objective: In this study, we propose to determine the incidence of supratherapeutic anti-Xa levels among underweight patients receiving standard prophylaxis and examine the correlation between dose and anti-Xa level.

Methods: Retrospective review of underweight patients who were admitted to SLEH from March 1, 2011 to December 31, 2011 with an additional prospective observational period from January 1, 2012 to March 1, 2012.

Results: The majority of patients achieved supratherapeutic anti-Xa levels in spite of adequate renal function. A proportionate decrease in anti-Xa level was observed in patients receiving dose reductions and serial anti-Xa measurements. There was no correlation between dose in mg/kg and anti-Xa levels or creatinine clearance and anti-Xa levels.

Conclusions: Empiric dose reductions should be considered in low body weight patients and confirmed with follow up anti-Xa levels.

Disclosures: G Nweke, G Laine, D Varkey and M Bayat have nothing to disclose. K Putney resides on the TSHP R&E Foundation Poster Review Committee.

R-3 A Comparison of outcomes with low versus high volumes of fluid resuscitation in sepsis patients
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Not previously presented

Background: Early Goal Directed Therapy (EGDT) in the emergency department (ED) has shown to improve survival in patient with sepsis.

Objectives: The objective of this study is to evaluate the relationship between the volumes of fluid administered in the initial 6 hours after the diagnosis of sepsis and its association with clinical outcomes.

Method(s): This retrospective, IRB approved study included patients in Memorial Hermann ED diagnosed with septic shock. The primary outcome is the change in severity of organ damage from baseline to 24 hours, defined by the Sequential Organ Failure Assessment (SOFA) scores. Secondary outcomes include hemodynamic monitoring of fluid resuscitation endpoints (CVP, ScVo2, Scvo2) in six hours, hospital length of stay, requirement for vasopressor therapy and hospital mortality.

Preliminary Result(s): The average change in SOFA scores from baseline to 24 hours in the low and high volume groups was 0.29 (n = 17) and -0.12 (49 patients), respectively with similar baseline SOFA scores. However, the patients in the high volume group also experienced increased hospital length of stay, in-hospital mortality, and requirement for vasopressor therapy. Additionally, this analysis confirmed the lack of consistent monitoring via CVP in those patients that present with septic shock.

Conclusion(s): Preliminary results of this analysis indicate a trend towards decreased SOFA scores in those patients that received fluid resuscitation volumes greater than 20 mL/kg. Larger studies are required to further delineate the relationship between total fluid resuscitation and clinical outcomes.

Disclosure(s): The authors have nothing to disclose.

R-4 A Retrospective Medication Usage Evaluation of Novel Anticoagulants Dabigatran Etexilate and Rivaroxaban
Background: Major areas of concern associated with dabigatran and rivaroxaban include utilization for a non-FDA approved indication, adverse events such as hemorrhage and thromboembolism, proper renal dose adjustment and appropriate length of anticoagulation.

Objective: To analyze appropriate usage of dabigatran and rivaroxaban at Baptist Health System.

Methods: Multicenter retrospective chart review conducted October 1, 2010 to November 30, 2011. Study subjects >18 years of age were identified from the HMM Clinical Drug Utilization Report.

Results: 62 patients who received dabigatran and 35 patients who received rivaroxaban were identified.

Dabigatran: 49 (79%) of 62 patients were prescribed for an FDA indication. 6 (10%) of patients had a thromboembolic event, of which 5 were >75 yo. 11(17%) of the patients had a GI bleed of which 10 patients were >75yo; 5 of the 10 patients >75yo had a history of gastritis. 33 (53%) of 62 patients had a CrCl < 30ml/min. 16 (26%) of 62 patients had concomitant anticoagulation.

Rivaroxaban: 33 (94%) of 35 patients were prescribed for an FDA indication. One patient developed a thromboembolic event. 3 (9%) of patients had non-major bleeding. 3 (9%) of the patients had a CrCl <30ml/min. 26 (79%) of the patients had appropriate length of anticoagulation.

Conclusions: The majority of patients receiving dabigatran and rivaroxaban were in compliance with FDA approved indications. Renal impairment adjustment and concomitant anticoagulation frequently were not addressed. For dabigatran, patients >75 yo pose a larger risk for bleeding as do patients with predisposed gastritis.

Disclosure: AM Rendon, P Cuellar, RK Purcell have nothing to disclose.

R-5 The Identification of General Medicine Ward Inpatients Prescribed Medications with Patient Assistance Programs and Subsequent Enrollment into these Programs Prior to Discharge

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Not previously presented

Background: The 2010 U.S. Census Bureau reports 16.3% of the population without health insurance. Dallas County has the second-highest uninsured population in Texas. These patients, a large portion of whom are hospitalized at Parkland Health & Hospital System (PHHS), are screened for eligibility in industry-sponsored patient assistance programs (PAPs).

Objectives: To identify the most common medications filled after discharge from PHHS that have a PAP available and to increase PAP screening and enrollment by formalizing the PAP process prior to discharge

Methods: A prospective chart review was conducted over 2-weeks to determine the top 15 most commonly prescribed medications that have PAPs available. A real time computer-generated list provided a daily report of patients who received at least one of these medications during their inpatient stay over a 6-week time frame. Patients were screened to determine if they were eligible for a PAP and the enrollment process was initiated prior to patient discharge.

Results: The prospective chart review identified 580 discharge prescriptions for the targeted drugs and 1.4% of those prescriptions that were potentially eligible for a PAP were enrolled. After formalization, 445 prescriptions were identified as potentially eligible for a PAP, 215 were screened prior to discharge, and two patients have been enrolled to date. The potential total cost savings if all patients are subsequently enrolled would be $13,584.
Conclusions: Prospectively evaluating patients using an automated method increased the number of patients screened prior to discharge and increased savings to the system by earlier enrollment in PAPs.

Disclosures: All authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities.

R-7 Impact of a Financial Incentive on Persistence to Beta-Blocker Therapy following a Myocardial Infarction
SP Lozano, PJ Godley, P Tabor
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Not previously presented

Background: The annual incidence of a new myocardial infarction (MI) is estimated to be 610,000, and recurrent events are estimated to be 325,000. The 2011 HEDIS measures include the use of beta-blockers after an MI, and current guidelines recommend, unless contraindicated, the use of beta-blockers in the secondary prevention of coronary vascular diseases. Adherence rates to beta-blockers continually decline following hospital discharge.

Objective: The goal of this study is to assess whether the medication adherence program impacted the persistence to beta-blocker therapy.

Methods: This is a retrospective evaluation of persistence to beta-blocker therapy before and after the implementation of the medication adherence program. Persistence is determined by analysis of beta-blocker prescription claims 6 months following hospital discharge as defined by the HEDIS measurement and will be compared to the 2010 Scott and White Health Plan HEDIS measure of “Persistence of Beta-Blocker Treatment after a Heart Attack.” Persistence is defined as at least 75% of the days’ supply filled (≥ 135 days covered during the 180 days post discharge).

Results: The 2010 Scott and White Beta-Blocker HEDIS measure is 65.12%. Fifty-four patients were eligible to enroll in the financial incentive program. A total of 18 patients enrolled, and 16 patients completed the program. The persistence rate to beta-blocker therapy was determined to be 81.25%.

Conclusions: A financial incentive in the form of a copay waiver may have the potential to improve persistence to beta-blocker therapy following hospitalization from a myocardial infarction.

Disclosures: SP Lozano has nothing to disclose. PJ Godley has nothing to disclose. P Tabor has nothing to disclose.

R-8 Evaluation of Opioid Use in Ambulatory Patients taking Quetiapine versus those taking Olanzapine
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Not previously presented

Background: There are many recent case reports describing quetiapine abuse, both within the incarcerated population and the community. Within the Parkland Health & Hospital System, quetiapine is currently the most costly antipsychotic based on its use. There is concern that this medication is being inappropriately prescribed in patients with opioid abuse disorders.

Objectives: To determine if there is a higher incidence of hydrocodone use among patients taking quetiapine compared to olanzapine, and to compare the incidence and types of substance abuse disorders in these two groups.

Methods: This is a retrospective review comparing hydrocodone use in ambulatory patients taking quetiapine versus olanzapine. Adult patients greater than 18 years of age who filled at least a 4 month supply of antipsychotic over a 6 month time frame (beginning January 1, 2011- July 1, 2011) were included. The primary endpoint was proportion of patients who
received at least one prescription for hydrocodone.

Results: The final analysis included 69 patients in the quetiapine group and 18 patients in the olanzapine group. There was a non-significant increase in the proportion of patients in the olanzapine group who received at least one prescription for hydrocodone compared with the quetiapine group (38.9% vs. 29.0%, respectively, p=0.4251)

Conclusions: At Parkland, quetiapine is prescribed 5 times more frequently than olanzapine; therefore the perception that opioids are abused in the quetiapine population compared to other antipsychotics may be skewed. There may actually be a greater risk of abuse in patients taking other atypical antipsychotics. Further investigation is warranted.

Disclosures: JB McClelland, JL Nelson, and JJ Quinn have nothing to disclose.

R-9 The Impact of a Pharmacy Pain Team on Adult Patients with Acute and/or Chronic Pain
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Not previously presented

Background: Pain is a major health problem affecting more than 15% of adults in the U.S. In a multidisciplinary pain management team, pharmacists can optimize pharmacotherapy quality by ensuring safe and appropriate medication use. Parkland Hospital currently has three inpatient pain consult services including a pharmacy pain medication management service. The pharmacy pain consult service, initiated in November 2009, has received over 150 consults.

Objective: To assess the impact of the pharmacy pain consult service on pain-related issues.

Methods: This retrospective study evaluated patients admitted from November 2009 through November 2011 and received a pharmacy pain consult. Exclusion criteria included patients discharged prior to pharmacist visit, those that left against medical advice, and those whose care was assumed by palliative care. Primary outcomes were the evaluation of patient’s average pain score pre-consult, post-consult, and pre-discharge, with 30% decrease considered clinically significant.

Results: One-hundred patient charts were included in the final analysis. The median age was 43 years and 66% were males. Two-thirds of patients showed clinically significant decreases in average pain scores from pre-consult to post-consult while 62% showed clinically significant decreases from pre-consult to pre-discharge. Over 800 interventions were made by the pharmacist. Overall function improvement was seen in 86.6% of patients. Fifty-three percent reported opioid-related adverse events and 14% were readmitted within 30 days due to unresolved pain.

Conclusions: Pain management is an area that provides opportunities for pharmacotherapy interventions, and pharmacists’ involvement on an inpatient pain consult service had a positive impact on pain scores and functionality.

Disclosures: SE Mathew, KS Alvarez, C Chamberlain, CA Alvarez, and M Shah have nothing to disclose.

R-10 Pharmacist’s impact on achieving best care (ABC) in diabetes
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Not previously presented in current form

Background: The American Diabetes Association (ADA) established diabetes treatment goals consisting of an A1c<7%, blood pressure (BP) <130/80 mm Hg, and low density lipoprotein (LDL)<100 mg/dL. The pharmacist’s influence on reaching the composite of these goals, collectively called the “ABCs of diabetes”, has yet to be defined.
Objective(s): To evaluate attainment of the composite of A1c<7%, BP<130/80 mm Hg, and LDL<100 mg/dL in patients diagnosed with type 2 diabetes followed by clinical pharmacists as compared to those not followed by a clinical pharmacist.

Methods or Procedures: This retrospective study was conducted using an electronic medical record (EMR) from community clinics to identify adult type 2 diabetes patients. Documentation of at least two values for each of the parameters during the study period was required. At least two visits with a clinical pharmacist or two visits with a physician (comparison group) were necessary. The primary endpoint is attainment of an A1C<7%, BP <130/80 mm Hg, and LDL <100 mg/dL.

Results: 172 patients in the usual care group and 152 patients in the clinical pharmacist group were enrolled. Baseline LDL and BP were similar between groups, but the baseline A1c for the clinical pharmacist group (8.58) was higher than the usual care group (7.86, p=0.0003). 14.5% of the usual care group attained the primary outcome and 11.8% of the clinical pharmacist group (p=0.48).

Conclusion(s): When patients see clinical pharmacists, the ABCs of diabetes are attained similarly to patients receiving usual care. However, patients receiving clinical pharmacy services may be more uncontrolled initially.

Disclosure(s): Nothing to Disclose

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R-11 Post Surgical Infections Associated With Vertical Expandable Prosthetic Titanium Rib (VEPTR) Procedure
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Not previously presented

Background: The VEPTR is a surgically implanted device used to treat thoracic insufficiency in pediatric patients with scoliosis and various conditions. Post surgical infections are a complication associated with VEPTR procedures. The rate of infection following a VEPTR procedure at this institution has not been formally identified.

Objectives: To identify the rate of post surgical infections associated with VEPTR procedures; to evaluate the most common organisms identified and the effect and use of pre-operative antibiotics.

Methods: Data collected from 2009 to 2011 from the Spinal and Thoracic Treatment and Research (STTAR) center database. Retrospective chart review conducted to assess: patient age/sex, procedure, pre-operative antibiotic, post-operative antibiotic doses, number of days to infection from procedure, identified organism(s), and VEPTR device removal due to infection.

Results: 906 VEPTR procedures were performed with 96 post surgical infections identified, yielding a 10% rate. 40 patients total were identified. Expansion of the VEPTR device accounted for 70% of procedures. Pre-operatively, 19 and 21 patients received clindamycin and cefazolin, respectively. All patients received 24 hours of antibiotics post-operatively. The average number of days from procedure to infection was 33. The most common organisms identified were MSSA (35%) and MRSA (23%). Cefazolin was associated with more organisms than clindamycin. 12 cases involved VEPTR device removal due to infection.

Conclusion: The rate of developing a post surgical infection following a VEPTR procedure at our institution is 10%. The most common organisms identified included MRSA and MSSA. Clindamycin may show more benefit against MRSA than cefazolin, however further research is needed for definitive statistics.

Disclosures: None

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R-12 Analysis of Perceived Barriers Encountered by Management within Pharmacy Workflow due to Intermittent Family and Medical Leave Act (FMLA) Leave at a Governmental Teaching Hospital
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Not previously presented

Background: Historically it has been stated by pharmacy management at the Harris County Hospital District (HCHD) that productivity is affected by the number of individuals on FMLA, particularly intermittent leave. Controls and safeguards to prevent abuse without infringing on employees’ rights have been instituted and even more recently, HCHD has outsourced the supervision of FMLA claims to an outside organization. Despite these measures, pharmacy management believes that barriers still exist.

Objective: The primary objective of the study is to determine what the perceived barriers are. Specific aims include determining what the specific barriers are to workflow as deemed by the Pharmacy Supervisors and if there is a commonality between different facilities when an employee is on intermittent FMLA leave.

Method(s): This qualitative study will be submitted to the University of Houston’s institutional review board (IRB) prior to commencement. Inclusion criteria include employees of HCHD who currently hold a title of Pharmacy Supervisor in any of the 15 outpatient/ambulatory pharmacies. Identified Pharmacy Supervisors will be provided the consent document requesting participation. Upon consent, face-to-face interviews comprising of only the Pharmacy Supervisor and principal investigator will be conducted. Subjects will be asked to answer approximately 15 questions from a semi-structured questionnaire relating barriers to workflow they may experience due to employees on intermittent FMLA leave. Interviews will be audio recorded for manual transcription and the Grounded Theory approach will be utilized for data coding and analysis.

Result(s): Data collection and analysis are in progress.

Conclusion(s): Research in progress.

Disclosure(s): A Shah-Mohammadi, EJ Essien, LV Gould, RK Roux and SM Abughosh have nothing to disclose.

R-13 Evaluating appropriate use of activated recombinant factor seven (rFVII) as adjunctive therapy in major hemorrhaging
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Not previously presented

Background: After approval of recombinant factor VIIa (rFVIIa) for use in patients with hemophilia, rFVIIa has been used outside of its original indications. To date, these trials have not shown benefit in mortality as well as having large variations in regards to dosing. Even with established guidelines, 40% of usage of rFVIIa is done without meeting all elements of those previously established guidelines.

Objectives: The objective of this poster is to evaluate the use of rFVIIa at Scott & White Memorial Hospital as adjunctive therapy for major hemorrhaging. After evaluation of the data collected, a guideline for appropriate use of rFVIIa outside of approved indications will be developed.

Method(s) or Procedure(s): Patients will be identified using the hospital electronic medical record based on receiving at least one dose of rFVIIa over between July 1st, 2010 and June 30th, 2011. Patients will be excluded if they are under the age of 18 and have a diagnosis of hemophilia A or B with inhibitors to factor eight (FVIII) or nine (FIX), congenital factor seven (FVII) deficiencies, or acquired hemophilia with inhibitors to FVIII or FIX. Data collected will include demographics, cause and site of hemorrhage, rFVIIa dosing, and all pertinent information regarding the patient case.

Result(s): Pending
Conclusion(s): Pending final results

Disclosure(s): M De Luna has nothing to disclose. S Westbrook has nothing to disclose. DP Ciceri has nothing to disclose.
S Thomas has nothing to disclose

R-14 Evaluating the implementation of an insulin drip algorithm for postoperative liver transplantation patients
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Not previously presented

Background: Hyperglycemia occurs in postoperative liver transplant patients due to perioperative stress and high-dose glucocorticoids. Traditionally, postoperative insulin infusions have been utilized to address hyperglycemia.

Objectives: The primary objective is to assess the effectiveness of an insulin infusion order set to obtain goal BG < 180 mg/dL within 4 hours of initiation. Secondary objectives include comparing time to achieved BG target 100-150 mg/dL and assessing outcomes (length of stay (LOS), hypoglycemia (BG < 70 mg/dL), and 30-day mortality).

Method(s) or Procedure(s): A retrospective chart review of postoperative liver transplant patients at SLEH from January 2010– November 2011 was conducted. As the insulin algorithm was added January 10, 2011, patients were stratified according to transplant date and objectives assessed utilizing electronic records.

Results: A total of 84 patients were assessed with similar baseline characteristics. Goal BG < 180 mg/dL within 4 hours was achieved in 16% (6/37) and 23% (11/47) of pre-algorithm and post-algorithm patients respectively. Of patients not achieving goal BG < 180 mg/dL, post-algorithm patients achieved goal faster (mean 10 vs. 7.8 hours for pre-algorithm and post-algorithm respectively, p-value 0.01). Target BG 100-150 mg/dL was achieved within 24 hours of insulin initiation in 30% (22/37) and 87% (41/47) of pre-algorithm and post-algorithm patients respectively. There was no statistical difference in total LOS, ICU LOS, hypoglycemic events, or 30-day mortality.

Conclusions: More patients achieve goal BG < 180 mg/dL and BG target 100-150 mg/dL in the post-algorithm group. More aggressive bolus insulin may help to achieve goal BG.

Disclosures: E Wang, KS Putney, MJ Rabourn, RW Yau all have nothing to disclose.

R-15 Evaluation of empiric vancomycin dosing regimens in an overweight/obese population
NM Brock, PS Ochoa, JA Vega, CS Hwang, JT Jameson, HN Bickel
ASHP, New Orleans, LA, 12/7/12

Background: Based on current consensus guidelines for the American Society of Health-Systems Pharmacists, the Infectious Disease Society of America and the Society of Infectious Disease Pharmacists, vancomycin is recommended to be dosed at 15 mg/kg, based on total body weight, every 8-12 hours in patients with normal renal function; however, these recommendations do not take into account the altered pharmacokinetics obesity contribute in choosing the proper dosing regimen.

Objectives: The primary objective of this study is to evaluate the dosing and frequency of vancomycin which results in target trough concentrations in overweight and obese patients.

Methods: This is a retrospective review, a computer program used to keep record of pharmacist-managed vancomycin consults is being used to pull vancomycin consults from September 2008, to December 2011. Charts are briefly screened for exclusion data as the needed to pull appropriate charts is collected. Inclusion criteria is as follows: at least 18 years of age, at least three consecutive doses of vancomycin administered with a trough drawn within one hour of the next scheduled dose, and a body mass index (BMI) ≥ 25 kg/m2. Exclusion from the study will include pregnancy, unstable renal function,
hemodialysis, or a recent renal transplant, missed doses/incorrect timing of trough levels. The mean dose and frequency will be determined for a BMI of 25-29.9, 30-34.9, 35-39.9, 40-45, and > 45 kg/m² based on vancomycin trough levels that were at goal, below goal, and above goal, to determine the most accurate initial dosing strategies for the aforementioned cohorts for both vancomycin goal ranges. The relationship between time to goal trough and length of stay, and cost of therapy will also be evaluated.

Results: As of March 15, 2012, 30 charts, with a total of 37 regimens have been included into the study. The largest percentage of regimens have come from the lowest BMI category. Interestingly, the second most common patient regimens included are those from patients who fall into the largest BMI grouping. Initial analysis of the results show that the average dose needed to attain a goal trough in mg/kg for ABW is near 15 mg/kg in the smallest BMI category, but increased significantly in the largest BMI category. This may indicate that empiric doses would be better tailored to individual patients if BMI category is taken into consideration. Data was also analyzed by looking at how often regimens dosed appropriately according to guidelines (14-16 mg/kg) were able to attain a goal trough. Conversely, the data found using this method shows that appropriate doses tend to lead to subtherapeutic troughs, which contradicts the previous findings. This may be confounded by the fact that data was not stratified according to BMI. Finally, as expected, longer dosing intervals are required for decreasing renal function; however, data at this point is likely too minimal to see a true trend in the selection of proper intervals.

Conclusion: Preliminary results tentatively show that BMI may be able to play a role in the selection of the most appropriate empiric vancomycin dosing regimen; though, many more patients will need to be included into this study to appropriately represent the BMI stratification of the local population and to find any concrete trends in data.

Disclosures: All listed authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

R-16 Evaluation of Pediatric Antibiotic Dosing Errors and Clinical Impact in the Outpatient Managed Care Pharmacy Setting

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Background: Both inpatient and outpatient pediatric studies identify medication dosing errors as a primary cause of adverse events. Antibiotics account for the majority of medications prescribed in children and are frequently encountered in pediatric error reports.

Objectives: The purpose of this study is to (a) assess the dose appropriateness of pediatric antibiotic prescriptions dispensed in a community setting based on indication, weight, and age; (b) to determine the occurrence and type of antibiotic dosing errors; (c) to find the repercussions of the dosing error.

Methods: 550 antibiotic prescriptions dispensed to pediatric patients between August 1, 2009-July 31st, 2010 have been identified using prescription claims data. Dosing errors will be defined as above or below the recommended daily dose, total milligrams per day exceeding adult dose maximums, and antibiotics prescribed for viral upper respiratory infections. Information from the patient’s electronic medical record will be used to determine if the patient needed a repeat physician visit for a side effect or a new prescription, or if the parent or pediatric called the physician for a side effect or a new prescription, or if an emergency room visit was warranted.

Preliminary Results: Results pending.

Conclusions: Inappropriate pediatric dosing occurs frequently and occurs most commonly in the form of under-dosing for clinical indication. This presents an opportunity to educate prescribers in order to reduce prescription errors. The consequence of these prescribing errors is still being analyzed.

R-17 Development and Implementation of a Continuing Education Program to Promote Continual Readiness among Phar-
Background: Parkland Hospital employs over 200 pharmacists in inpatient, outpatient, clinical, informatics, and management roles. Due to expanding roles of pharmacists within our institution and variable levels of experience amongst pharmacists, continuing education is a key component to maintaining clinical competence. The Joint Commission mandates that “staff participate in ongoing education and training” and requires “the hospital take action when a staff member’s competence does not meet expectations.”

Objectives: To describe the implementation of a pharmacy continuing education program within a multicenter institution and to evaluate effect on clinical competence and staff acceptability.

Methods: The Pharmacy Advancement and Continuing Education (PACE) program was created to increase staff competence. Clinical pharmacy specialists were recruited to conduct lectures in specific high risk or volume areas in which it was determined that there may be deficiencies in pharmacist knowledge. All pharmacists were required to pass a 5-question post-lecture examination with a score of at least 80% to successfully complete the PACE lecture. Results of pre and post-tests were used to analyze pharmacist competence, and program evaluation forms were used to assess participant satisfaction with the program.

Results: To date, five PACE lectures have been completed. A total of 430 attendees were counted among the lectures. Pharmacist competency scores increased in all areas evaluated (pre-test (76%) vs. post-test (88.5%)). Ninety-six percent of attendees rated PACE as beneficial for learning.

Conclusion: The PACE program successfully improved pharmacist competence in a variety of clinical practice areas and meets the pharmacists’ needs for caring for complex patients.

Disclosure: The authors of the presentation have nothing to disclose.

R-18 Evaluation of the Link Between Chronic Antipsychotic use and Osteoporosis.
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Background: Patients with schizophrenia are at increased risk for developing osteoporosis, which might due to increased prolactin levels. Hyperprolactinemia can lead to suppression of hypothalamus-pituitary axis regulation of sex hormone production and over time, hypogonadism, which can affect bone health. There have been a few studies evaluating the link between antipsychotic use and osteoporosis, however the link is not well established and there is very little guidance regarding monitoring of prolactin levels.

Objectives: 1) Compare osteoporosis rates in patients receiving antipsychotic medications to a matched cohort group with no previous antipsychotic use. 2) Prolactin levels, effect of antipsychotic type, dosing and duration on osteoporosis rates, effect of confounding variables (other prolactin raising medications, Vitamin D levels, smoking status), and incidence of fractures.

Methods: This study is a retrospective cohort study comparing patients ≥50 years of age receiving an antipsychotic at the Dallas VA Medical Center 1/1/2009-12/31/2009 to a matched cohort. Patients must have been taking the same antipsychotic for at least 1 year, with no significant co-morbidities, or medications that increase osteoporosis risk. Patient demographics and antipsychotic information, Vitamin D, prolactin, testosterone and FSH/LH levels will be recorded. Use of other medications that may increase prolactin, smoking status, bone mineral density and history of fracture will also be recorded. Continuous data will be analyzed with the Student’s t test and nominal data will be analyzed using Chi square or Fisher’s exact test when
appropriate. Regression analysis will be performed to adjust for confounding variables and to evaluate primary objective.

Results: Research in progress

Conclusion: Research in progress

Disclosure: All authors of this presentation have the following disclosures concerning possible financial or personal relationships with commercial entities- nothing to disclose

R-19 Addressing medication barriers in patients with multiple sclerosis through survey administration
K Suh, B Gorsh, K Prasla, P Godley
Scott & White Health Plan, Temple, TX
New poster presentation

Background: Disease modifying treatments (DMTs) are the main course of therapy for multiple sclerosis (MS) patients in preventing disease progression and relapses. Unfortunately, most DMTs are costly self-injectables, leading to low treatment initiation or adherence. Patients who adhere to DMTs face additional complications such as long durations of treatment and side effects. However, it is important that MS patients use DMTs to obtain maximum benefit from these medications. Learning why patients discontinue or fail to start DMTs will better direct future treatment in MS.

Objectives: To assess which patient factors play a role in the utilization of DMTs in MS treatment, and to understand patients’ beliefs regarding DMTs and MS.

Methods: The Multiple Sclerosis Treatment Adherence Questionnaire (MS-TAQ) was slightly modified to determine why some patients never initiated DMTs. As a result, it was necessary to pretest the modified survey to ensure readability and appropriate formatting. MS patients who were members of Scott & White Health Plan at some point between 2005-2010 were chosen to participate.

Results: Twenty five patients identified as having MS through claims data were randomly selected. The sixteen respondents had MS on average for 17.9 years, and the majority were white females. All but one respondent said the readability and formatting of the survey was fine.

Conclusions: Upon minor edits to the pretest survey, the final questionnaire will be mailed to 405 MS patients with a target of 70% response. Through the administration of this survey, patients’ barriers to DMTs initiation and adherence in MS will hopefully be better understood.

Disclosure: K Suh is the first-year outcomes research fellow for the Novartis/Scott&White/University of Texas Outcomes Research Fellowship. B Gorsh is the second-year outcomes research fellow for the Novartis/Scott&White/University of Texas Outcomes Research Fellowship. K Prasla has nothing to disclose. P Godley has nothing to disclose.

R-20 Outpatient Parenteral Antimicrobial Therapy for the Treatment of Methicillin-Susceptible Staphylococcus aureus: A Comparison of Cefazolin and Ceftriaxone
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Previously presented at ASHP Midyear 2011, New Orleans, LA

Background: Methicillin-susceptible Staphylococcus aureus (MSSA) is one of the leading causes of long term infections, often requiring weeks of intravenous (IV) antibiotic therapy. In order to decrease hospital length of stay, outpatient parenteral antimicrobial therapy (OPAT) practices have been established at Harris County Hospital District, however, Harris County cannot provide disposable infusion pumps to its patients to infuse nafcillin, the drug of choice for MSSA infections. Ceph-
Losporins, such as cefazolin and ceftriaxone, have been useful alternatives to nafcillin for MSSA infections in the outpatient setting. Newer data are emerging citing emerging resistance to cefazolin by certain MSSA isolates, and very little data exist comparing the clinical outcomes of patients treated with cefazolin in comparison to ceftriaxone.

Objective(s): To compare favorable clinical outcomes in patients receiving OPAT with ceftriaxone or cefazolin for the treatment of MSSA infections.

Method(s): A retrospective chart review will be performed for all patients with a documented MSSA infection who received either cefazolin or ceftriaxone as OPAT. Pregnant or nursing patients will be excluded, along with patients who received OPAT with antibiotics other than cefazolin or ceftriaxone and those who had polymicrobial infections. Patients will be stratified into two groups: cefazolin and ceftriaxone. Categorical data will be compared using chi-square test, and continuous data will be compared using Student’s t-test. Variance analysis will be performed if necessary. For all analyses, p-values less than or equal to 0.05 will be considered statistically significant.

Result(s): Pending

Conclusion(s): Pending

Disclosure(s): SA Winans and AM Luce have nothing to disclose.

R-21 Two Year Evaluation of Clinical Outcomes in a Pharmacist Led Medication Management Program vs Usual Care in a Managed Care Population
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Not previously presented

Background – Improving health outcomes for diabetes depends on many factors, including access to care, appropriate medical management, patient self-care, and adherence to treatment regimens. Programs aimed at improving these aspects of care through patient monitoring and education reduce direct health care costs and increase satisfaction with care.

Objectives – The primary objective is to measure change in HgA1c from baseline to endpoint and compare the number of patients enrolled in a pharmacist led Medication Management Program (MMP) with a HgA1c < 7.0% and with a HgA1c > 9.0% versus patients in a matched control group. Secondary objectives compare patient outcomes for blood pressure and lipid measurements between the two groups.

Method – This two-year study compares diabetes related outcomes between a prospective intervention group and a matched retrospective control group. The intervention group participated in the pharmacist led MMP, which consisted of monthly appointments for at least one year and quarterly thereafter if they were at goal. During each visit, patients were monitored according to the American Diabetes Association guidelines and medication adjustments were made a necessary per a collaborative practice agreement. Patients received education regarding diabetes, associated risk factors, and co-morbid conditions. The program also provided copayment waivers on diabetes medications and testing supplies. Control patients were matched one-to-one based on A1c, gender, age, and Charlson Comorbidity Index scores (CCI). Both groups continued standard medical care from their physicians. Statistical analysis was performed with the paired t-test and Fisher’s exact test.

Results – Final results pending.

Conclusions – Final conclusions pending.

Disclosures – KK Wang has nothing to disclose. J Juan has nothing to disclose. PA Tabor has nothing to disclose. PJ Godley has nothing to disclose. K Suh has nothing to disclose. NN Vuong has nothing to disclose.
R-22 Evaluating effectiveness of pharmacy-facilitated enrollment in patient assistance programs
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Not previously presented

Background: PAPs offer medications to indigent patients for free or at substantially reduced costs. PAPs have also been shown to be a source of cost-avoidance for healthcare institutions. Our institution employs pharmacy personnel to facilitate the enrollment of patients into PAPs. It was noted that the costs of biologic DMARDs had been increasing steadily over the last several years, and one potential method of reducing costs associated with the use of expensive biologic agents would be ensuring that all eligible patients receive medications through patient assistance programs.

Objectives: Evaluate the effectiveness of the pharmacy-facilitated medication access enrollment program and identify potential efficiency improvements resulting in maximization of cost avoidance.

Methods: A retrospective chart and MAS database review was performed for patients identified as having been prescribed Entanercept, Adalimumab, Abatacept, or Infliximab from 8/1/2010-7/31/2011. Patients were reviewed to determine if they had been screened for eligibility and approval, and to calculate cost-avoidance to the institution.

Results: Of 356 patients, 30 (8%) were approved for PAP and 133 (37%) require MAS follow-up to determine approval status. Potential total cost-avoidance is calculated to be $110,988.

Conclusions: A high percentage of patients are screened for PAP eligibility, however different documentation styles limit the effectiveness of the database in determining approval status. Creating MAS database usage protocols would increase consistency of documentation, capture of eligible patients, and improve cost-avoidance.

Disclosures: J McNulty has nothing to disclose. E Moss has nothing to disclose. E Moore has nothing to disclose. C Berge has nothing to disclose.

R-23 Implementation and Evaluation of a VTE Prophylaxis Protocol in a Medical-Surgical Unit
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Previously presented: 46th ASHP Midyear Clinical Meeting, New Orleans LA, December 2011 (New information being presented)

Background: The Agency for Healthcare Research and Quality recognized appropriate VTE prophylaxis in patients at risk as No. 1 among Top 11 Safety Practices. Despite extensive data documenting incidence, risk factors and measures for preventing VTE, evidence-based guidelines and recommendations are often underutilized. Literature exists regarding different active and passive strategies utilized to improve use of VTE prophylaxis but there is no “one-size-fits-all” solution which will be effective for every setting.

Objective: To evaluate an active strategy used to improve the use of VTE prophylaxis in hospitalized patients by implementation of a protocol.

Methods: Prior to commencement, this study was submitted to and received approval from the Institutional Review Board. Electronic records were used to identify patients admitted to a Medical-Surgical floor from June 2011 to February 2012. Using data collected retrospectively, percentage of eligible patients receiving VTE prophylaxis, incidence of VTE up to 30 days post discharge and occurrence of bleeding complications were compared among patients admitted prior to and post implementation of VTE prophylaxis protocol.
Results: A total of 308 patients were identified, with 69 patients (20 [28.9%] in low risk; 49 [71.1%] in moderate risk and 0 [0%] in high risk) included in the pre-implementation analysis and 24 patients (10 [41.7%] in low risk; 14 [58.3%] in moderate risk and 0 [0%] in high risk) in the post-implementation analysis. Overall, 52/69 patients (75.3%) received appropriate prophylaxis in the pre-implementation group compared to 21/24 patients (87.5%) in the post-implementation group. Further analysis is currently pending.

Conclusion: Pending.

Disclosure: J Karri has nothing to disclose. M Narayanan has nothing to disclose.

T.N. Dawson, M.L. Cunningham, T.A. Tabor, P.J. Godley, K. Prasla, K. Suh
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Not previously presented

Background: In 2006, Scott and White Health Plan began offering a member benefit for uncontrolled diabetic patients called the Medication Management Program (MMP). Despite similar medication adherence rates among patients participating in the MMP and matched controls receiving usual care, a previous study found that the A1c for patients in the MMP was improved to a significantly greater degree after 1 year of follow-up when compared to the control group (-10.6% vs. -6.3%, p=0.048), and a significant difference between the two groups was sustained after 2 years of follow-up. As medication adherence does not seem to completely account for the difference in A1c, this study seeks to uncover other possible explanations for improved glucose control in the intervention group.

Objectives: To determine how oral hypoglycemic medication management and patient self-management impact A1c control in a pharmacist managed population versus control group.

Methods: This two year study consists of a prospective intervention group and a retrospective, matched control group. Patients in the intervention group receive co-payment waivers for selected diabetes medications and supplies during participation in a pharmacist-led medication management program, consisting of physical assessment, medication and laboratory monitoring, and patient education. Patients in the control group receive standard medical care and do not receive the co-payment waiver. The electronic medical record will be used to assess the number of oral medication dose titrations per patient, number of new diabetes medications initiated in each patient, persistence based on refill patterns, test strip utilization, interventions made, and results documented.

Result(s): Results Pending

Conclusion(s): Pending

Disclosure(s): TN Dawson has nothing to disclose. ML Cunningham has nothing to disclose. T Tabor has nothing to disclose. PJ Godley has nothing to disclose, K Prasla has nothing to disclose. K Suh is the Novartis outcomes research fellow at Scott and White.

R-25 Evaluation of standardized, low-dose daptomycin in the treatment of urinary tract infections
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Not previously presented
Background: Urinary tract infections (UTIs) are the most common hospital-acquired infection. Daptomycin is a cyclic lipopeptide antibiotic with a favorable pharmacologic profile for the treatment of UTIs, including bactericidal activity and 50 – 70% renal elimination of active drug. It is hypothesized that standardized, low-dose daptomycin may be effective for the treatment of UTIs due to high penetration of active drug into urine. Clinical data supporting the use of daptomycin for the treatment of UTIs, however, is limited. St. Luke’s Episcopal Hospital (SLEH) has implemented a policy that standardizes low-dose (250 mg) daptomycin for all patient weights for the treatment of UTIs.

Objective: The primary objective of this study was to assess the efficacy, safety, and cost-savings of standardized, low-dose daptomycin in treating Gram-positive uropathogens from UTIs.

Methods: This was a retrospective observational study in hospitalized patients treated with standardized, low-dose daptomycin for UTIs from January 2010 to March 2012 at SLEH. Patients were assessed for: sterilization of urine cultures, improvement in signs/symptoms of UTI, rates of relapse, re-infection, bacteremia, and adverse events related to daptomycin therapy.

Results: A total of 13 patients were identified. The most common uropathogen isolated was vancomycin-resistant Enterococcus (10/13). All patients experienced microbiologic and clinical cure with no incidence of relapse, re-infection, or bacteremia and no reported adverse events. Standardized, low-dose daptomycin resulted in a 50% cost-reduction compared with weight-based dosing.

Conclusion: Standardized, low-dose daptomycin is safe and effective for the treatment of Gram-positive UTIs with substantial cost-savings compared with weight-based dosing.

Disclosures: M Moaddab, K Putney, and HR Palmer have nothing to disclose.

R-26 Evaluation of Hemin Use at an Academic Medical Center
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Not previously presented

Background: The acute porphyrias, a group of genetic disorders caused by a dysfunction in heme biosynthesis, are known for their life-threatening attacks and neurologic symptoms. As first-line therapy, hemin is indicated for ameliorating acute porphyria attacks due to acute intermittent porphyria, variegate porphyria, hereditary coproporphyria, and ALA dehydratase porphyria. Use of hemin for erythropoietic protoporphyria and as prophylaxis for recurrent attacks is currently under investigation. Most practitioners recommend a dose of 3-4 mg/kg/day for 4 days to treat acute porphyria attacks. Hemin is a very costly medication and is restricted to Gastrointestinal and Hematology/Oncology faculty at the University of Texas Medical Branch.

Objective: The purpose of this medication use evaluation is to evaluate the appropriateness of hemin use at the University of Texas Medical Branch.

Methods: During fiscal year 2010-2011, 6 patients were identified that received hemin. Demographic information for these patients was collected and information on the dose, indication, and frequency/duration of hemin therapy was analyzed for appropriateness based on current literature.

Results: Data were collected on 88 hemin doses with the majority of use for acute intermittent porphyria (58%), followed by erythropoietic protoporphyria (35.2%). The average dose was 4.19 mg/kg. Most doses were ordered for inpatient use by internal medicine teams (69.3%) and were given based on symptomatic presentation and patient history of porphyria (60.3%).

Conclusions: Hemin prescribing practices appear to correlate with the recommended indications for use and dosing par-
R-27 Dual Therapy for the Treatment of Chronic Hepatitis C at Scott & White Healthcare: A Retrospective Analysis
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Scott & White Healthcare, Temple, Texas
Not previously presented

Background: The standard of care therapy for the treatment of chronic infection with hepatitis C virus (HCV) has been dual therapy with peginterferon alpha and ribavirin, but recent FDA approval of two protease inhibitors has changed chronic HCV treatment standards. This study focuses on the previously recommended dual therapy with peginterferon alpha and ribavirin.

Objectives: Primary objectives are to assess the efficacy and safety of dual therapy with peginterferon alpha and ribavirin in treatment-naïve adult patients with genotype 1 chronic HCV treated at Scott & White Healthcare (SWHC).

Methods: A retrospective study utilizing SWHC and Scott & White Health Plan (SWHP) data identifying patients with ICD-9 code 070.54 (chronic hepatitis C without mention of hepatic coma) as well as from written medical records maintained by the Scott & White Division of Gastroenterology. SWHC patients initiating HCV treatment during the period from July 1, 2004 to June 30, 2009 will be eligible for study inclusion, with detailed analysis of the records of genotype 1 chronic HCV patients completing 48 weeks of continuous treatment and evaluation of HCV at SWHC by June 30, 2011. The 72-week continuous evaluation period (48 weeks of actual therapy) will begin with the date of initiation of HCV treatment (the “index date”) and will continue until the retesting for HCV RNA 24 weeks after completion of therapy. Once eligible subjects are identified and included in the study database, primary outcomes will be analyzed.

Results: Pending

Conclusion: Pending

Disclosure: C Kim has nothing to disclose. BA Browne has nothing to disclose. D Sears has nothing to disclose. K Prasla has nothing to disclose. K Suh has nothing to disclose. M Waits has nothing to disclose. S Thomas has nothing to disclose.

R-28 Effect of Different Protease Inhibitors, with or without Tenofovir, on Nephrotoxicity
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ASHP Midyear Clinical Meeting, New Orleans, LA, 12/7/2011

Background: The nephrotoxicity of tenofovir (TDF) has been reported extensively and reports have also shown a greater reduction in calculated glomerular filtration rate when TDF was used with a boosted protease inhibitor (PI); this is most likely due to an increase of TDF exposure of 20-30% by some boosted PI-containing regimens.

Objectives: To further observe the effect of different protease inhibitors, with or without tenofovir, on nephrotoxicity and determine if the effect is limited to specific protease inhibitors.

Method(s) or Procedure(s): A retrospective cohort study will compare the incidence of nephrotoxicity in HIV-infected subjects receiving boosted PI-containing regimens alone [atazanavir and ritonavir (ATV/r), darunavir and ritonavir (DRV/r), lopinavir and ritonavir (LPV/r)] and PI and TDF-containing regimens [PI-containing regimens atazanavir plus ritonavir (ATV/r), darunavir plus ritonavir (DRV/r), lopinavir plus ritonavir (LPV/r), plus tenofovir (TDF) and one additional antiretroviral agent].
The primary outcome is to assess nephrotoxicity defined as an increase in serum creatinine level of 0.5 mg/dL or 50%, whichever was greater. The secondary outcome is to observe the incidence of chronic kidney disease with PI monotherapy. Chronic kidney disease defined as 2 consecutive creatinine clearance values less than 60 mL/min/1.73 m2 measured over greater than or equal to 3 months.

Results: Research in progress.

Conclusion: Research in progress.

Disclosure(s): AC Moss, RD Crutchley, KW Garey have nothing to disclose. TT Zerai is a member of the Gilead HIV Speaker Bureau.

R-29 Implementing and Evaluating the Effectiveness of Fentanyl Transdermal System Patient Education
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Background: Despite FDA and ISMP warnings, reports continue of deaths and life threatening adverse events related to the inappropriate use and prescribing of fentanyl TTS.

Objectives: The primary objective was to assess a patient’s baseline knowledge level on how to safely use fentanyl TTS and evaluate the effectiveness of educating patients on its appropriate use. The secondary objective was to determine if fentanyl TTS is prescribed appropriately for its currently approved indication of chronic pain in non-opioid naïve patients.

Methods: A prospective observational analysis was performed on non-ICU hospital inpatients 18yrs and older; who were prescribed fentanyl TTS. Baseline knowledge of fentanyl TTS were assessed using a pre-questionnaire. Patients were then educated by teaching and demonstrating how to correctly use fentanyl TTS. A post-questionnaire was administered on a different day prior to discharge.

Results: Four survey questions were associated with significant improvements (p<0.05), when comparing pre and post questionnaire survey responses. Patient education in these areas can help improve knowledge of the proper use of fentanyl TTS. Fentanyl TTS was prescribed appropriately in 100% of all subjects based on the following factors assessed: other opioid used, first time use, initial dose, dose increase, and history of pain type.

Conclusion: Patient education did yield an increase in knowledge (in some domains) of proper use of fentanyl TTS. There is a difference in patient knowledge after patient education. Fentanyl TTS is also currently being prescribed appropriately within this patient population for its currently approved indication of chronic pain in non-opioid naïve patients.

Disclosures: None

R-30 Assessment of guideline adherence for initial vancomycin dosing in non-surgical patients
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Not previously presented

Background: Vancomycin is widely utilized for Gram-positive bacteria coverage across many indications. Initial dosing of 15-20 mg/kg is recommended to maintain trough levels >10 mcg/mL, which is critical for efficacy and prevention of resistance.

Objectives: The primary objective is to assess the frequency of low (<15 mg/kg) versus high (≥15 mg/kg) initial vancomycin dosing. Secondary objectives include assessment of trough levels and clinical outcomes.
Methods: A retrospective chart review was conducted of patients receiving vancomycin for non-surgical indications from May 2011 – November 2011. Patients were stratified according to initial dose for assessment of outcomes.

Results: A total of 91 patients were reviewed. Seventy-four patients received low dose; 17 received high. The low group weighed more than the high group (mean 99 kg ± 27.7, versus 65 kg ± 14.5, p<0.001), and had a higher percent of patients receiving a 1 gram dose (91.9% versus 70.6%, p=0.029). Monitoring of trough levels was inconsistent; true trough values were <10 mcg/mL for 8 of 17 (47%) patients in the low group, and for 1 of 3 (33%) in the high group. There were no significant differences between groups in reduction of white blood cell count, normalization of temperature, decline in renal function, mortality, or length of stay.

Conclusions: Most patients received less than 15 mg/kg at initiation of vancomycin therapy. Clinical outcomes are inconclusive due to confounding variables and a small patient population. Pharmacists play a significant role in the appropriate dosing and monitoring of vancomycin therapy.

Disclosures: JR Richardson, LC Davis, HR Palmer, KS Putney all have nothing to disclose

R-31 Proton Pump Inhibitor Continuation after ICU admission and Hospitalization
Theresa Onukaogu, Emory Martin III, Ola Oyetayo, Christopher Spradley, Scott & White Memorial Hospital and The University of Texas at Austin College of Pharmacy and The Texas A&M University Health System Sciences Center School of Medicine, Temple, TX.

Purpose: To retrospectively review the incidence of inappropriate continuation of proton pump inhibitors (PPIs) in ICU admitted patients who are then transferred to general medicine floors and are subsequently discharged from the hospital.

Methods: Using data retrospectively collected from the institution’s electronic records, 100 adult patients admitted to the ICU from September 2010 to August 2011 were randomly evaluated. The primary endpoint is the incidence of inappropriate continuation of PPIs in ICU admitted patients who are then transferred to general medicine units and subsequently discharged from the hospital with a PPI. Patients with an indication for PPI therapy prior to hospital admission were excluded from the analysis. Patients who had their PPI discontinued upon transfer to the floor were also excluded. The indication for PPI therapy during their ICU stay for each of the remaining patients was collected. The appropriateness of continuation post-ICU stay was evaluated.

Results: Of the one hundred patient cases that were reviewed, 50 patients did not meet the inclusion criteria due to having a prior history of gastroesophageal reflux disease (GERD), or were on acid suppressive therapy prior to hospital admission, or died during their hospitalization. PPI therapy was promptly discontinued on transfer to the floor for 8 patients who had no indication for continuation while 16 patients did not have their PPI discontinued until time of hospital discharge. This left 26 (52%) patients with PPI therapy continued at the time of hospital discharge. Only eight (13.8%) of these patients who were diagnosed with a new GI bleed had an appropriate indication for continued PPI therapy. Nine (15.5%) of these patients under care of the cardiothoracic ICU service, underwent heart surgery and were consequently placed on dual antiplatelet therapy with aspirin and clopidogrel had their PPI therapy discontinued at time of hospital discharge but each was discharged with a thirty day prescription for oral ranitidine. The remaining 9 (15.5%) patients who were under the service of the trauma and medicine team did not have an appropriate indication documented.

Conclusion: A small percentage of patients with continued PPI therapy post-ICU stay had appropriate documented indications for continued use while the cardiothoracic patients met our standards for appropriate discontinuation of PPI therapy but had 30 days of ranitidine therapy initiated for patients discharged on dual anti-platelet therapy. The trauma and medicine service patients did not have documented indications for continued PPI therapy.

R-32 The Impact of a Multi-disciplinary Program on Heart Failure Patient Readmissions
LJ Krustchinsky
Background: Multi-disciplinary care of heart failure (HF) patients may reduce hospital readmissions through comprehensive education and focusing on medications and self-management.

Objectives: The objective of this study is to determine if a multi-disciplinary HF education program reduces the 30-day hospital readmission rate due to HF exacerbation compared to historical average. Additional objectives include determining if discharge medication counseling by a pharmacist improves the use of evidence-based therapeutics in HF patients, improves patient adherence, and reduces the 30-day hospital readmission rate.

Methods: Multi-disciplinary intervention - Adult patients admitted to medicine teaching teams with a history of HF received one-on-one HF education. Pharmacist intervention sub-study - Pharmacists provided personalized medication education to the intervention group. 30-day post-discharge phone calls were conducted for sub-study patients to inquire about hospital readmission and HF medication compliance.

Results: The rate of 30-day HF readmission for 180 patients was 25.8%. Sixteen patients were consented for the pharmacist-intervention sub-study. Of the eight patients assigned to the study group, none were rehospitalized for HF (0%), where one patient in the control group was (12.5%). Patients' self-reported rates of medication compliance were similar between the two groups.

Conclusions: The multi-disciplinary intervention resulted in a numerically lower 30-day HF hospital readmission rate compared to historical controls. The pharmacist sub-study results look promising but the modest scope does not allow a formal conclusion.

Disclosure: Nothing to disclose

R-33 Piloting the role of a pharmacist within an interdisciplinary team on a home visit program
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Previously presented at American Society of Health-System Pharmacist Midyear, New Orleans, LA, December 7, 2011

Background: More than 1.5 million preventable medication-related adverse events occur each year in the United States accounting for an excess of $177 billion in medication-related morbidity and mortality. Research has shown that pharmacist-driven medication therapy management programs mitigate the potential for medication misadventures. Furthermore, the ASHP Health-System Pharmacy 2015 Initiative is a national platform that advocates for the extension of the pharmacist role into the home care setting. Harris County Hospital District currently has an established home visit program [the Quentin Mease House Call program] comprised of two physicians, two nurse practitioners, a social worker, a case manager, and an administrative assistant. The addition of pharmacy services to the Quentin Mease House Call program serves as an opportunity for pharmacists to indirectly enhance patient care, promote cost-savings, and serve as an educational resource to providers.

Objective: The objective of this quality initiative is to determine the impact of pharmacy services on the Harris County Hospital District (HCHD) Quentin Mease House Call program.

Methods: A retrospective, pharmacist-driven, comprehensive medication review was performed on patients enrolled in the Quentin Mease House Call who were at least 65 years of age and taking four or more medications. The total number of pharmacist interventions identified and the total number of accepted interventions were compared. Additionally, the interventions were categorized as either a potential cost-savings or potential adverse event avoidance.

Results: A total of 70 patients were reviewed and met the study criteria. Results to be presented.
Conclusion: To be presented.

Disclosures: The authors of this presentation have nothing to disclose concerning financial or personal relations with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

R-34 Analysis of Online Patient Information Resources for Complementary and Alternative Medicine
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Not previously presented

Background: Emerging technology gives patients access to many online resources about complementary and alternative medicine (CAM). Healthcare professionals often debate which online patient resource provides correct information and can be easily accessible.

Objective: To analyze and compare online patient information resources to a healthcare professional information resource regarding CAM in order to establish a reliable patient information resource to recommend to patients.

Method(s): Five online patient information resources (NCCAM, NIH:ODS, Pharmacy Times, Wikipedia, and WebMD) were compared to one resource (Micromedex). Data were collected from each electronic database on the following CAM therapies: fish oil, garlic, ginseng, soy, resveratrol, acupuncture, and tai chi. The evaluation of each resource was based on the correctness, clarity of content, ease of use, and the Flesch-Kincaid reading level.

Result(s): The NCCAM resource contained all of the CAM and ranked the highest in the correctness of the information (8), clarity of content (9), ease of use (8) and had the lowest Flesch-Kincaid reading level (10.6). The Wikipedia resource did not contain all of CAM and obtained the lowest grade correctness of information (6), clarity of content (5), ease of use (4), and had the highest Flesch-Kincaid reading level (15.3).

Conclusion(s): NCCAM is the most accurate and easily navigated source for patient online CAM information. It should be recommended by healthcare professionals to patients.

Disclosure(s): None

R-35 Application of Lean Methodology at Ben Taub Inpatient Pharmacy to Improve Efficiency of Extemporaneous Compounding Workflow
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Presented at ASHP Midyear Clinical Meeting, New Orleans, LA, 12/07/11

Background: Cost savings and increased work efficiency are important priorities in the hospital pharmacy setting. An increasingly popular and effective way to help reduce waste and improve overall workflow is through performance improvement strategies such as Lean.

Objective(s): To evaluate and apply the Lean process to improve efficiency of the extemporaneous compounding workflow at Ben Taub General Hospital, Houston, TX.

Method(s) or Procedure(s): The first phase of this study involved observation of the extemporaneous compounding workflow, and collection of compounding, waste and other pertinent data over a minimum period of two weeks. In the second phase, Lean methodology principles were applied to evaluate the collected data and identify areas which can be modified.
in the workflow to streamline efficiency and reduce waste. Identified changes were implemented in a six week test pilot. During the pilot period, data was collected and analyzed on new workflow parameters including changes in performance and compounding efficiency, as well as reductions in waste. A final analysis of the test pilot and data was then completed.

Result(s): Revised pilot workflow resulted in increased efficiency by which the technician was able to perform more tasks in the same amount of time. Overall technician work time saved was 5.25 hours, which equivocates into a 0.66 or 2/3 full time equivalent savings.

Conclusion(s): Utilization of the Lean methodology process is an effective and inexpensive method to reduce waste and increase efficiency in the inpatient pharmacy setting

Disclosure(s): JD Blee, S Gautreaux, L Gokhman, SG Gautreaux, VI Nwabeke, RK Roux have nothing to disclose

R-36 Evaluation of Daptomycin Consumption and Microbiological Patterns at a Large Tertiary Teaching Hospital
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Not previously presented

Background: Daptomycin expenditures continue to increase at St Luke’s Episcopal Hospital (SLEH). In 2008, a daptomycin dosing policy was approved at SLEH containing standardized dosing for weight, indication and renal function. Previous medication use evaluations were completed in 2008 and 2009.

Objectives: The objective of this study is to evaluate daptomycin consumption and microbiological patterns.

Methods: Patient data was collected retrospectively from medical records of hospitalized adult patients who received daptomycin between October 31st and November 30th, 2011. The following data was collected: baseline demographics, sources of infection, comorbidities, indications, and microbiological results. Daptomycin consumption, vancomycin Enterococcus spp (VRE) and Staphylococcus aureus rates were also evaluated.

Results: Sixty-one patients were analyzed. The mean age was 57 years (range, 22 to 84) and 37 (60.6%) were males. Forty-five patients received daptomycin empirically (73.8%) and 16 definitively (26.2%). The most frequent dose of daptomycin was 8 mg/kg (n=26; 42.6%). Overall duration of therapy was 6.1 days (range, 1 to 42). For empiric therapy, 27 positive culture results were isolated: 3 (37.5%) were S. aureus with a vancomycin minimum inhibitory concentration (MIC) >2 and 9 were VRE. From 2008-2011, VRE rates were similar (19.1%) while S. aureus rates with elevated MICs increased (2007 [3%] to 2011[11.8%]).

Conclusion: Overall daptomycin use was appropriate. VRE rates have not increased since 2008 while Staphylococcus aureus with MICs of > 2 have increased. Higher doses of daptomycin and change in microbiologic patterns may explain the increase in utilization.

Disclosure: DR Bowers and HR Palmer have nothing to disclose

R-37 Retrospective Outcomes Analysis of a Pharmacist-Provided Medicare Part D Medication Therapy Management Program in 2011
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Not previously presented

Background: The Medicare Modernization Act of 2003 mandated the provision of medication therapy management (MTM)
services to eligible Medicare Part D beneficiaries. The Scott & White Health Plan (SWHP) MTM program in 2011 provided services including comprehensive medication reviews by pharmacists identifying medication-related problems, preventive care needs, and measures for drug cost savings.

Objective: To evaluate the clinical and economic outcomes of a pharmacist-provided Medicare Part D MTM Program at SWHP in 2011.

Methods: This is a retrospective data review of the 2011 MTM program. Clinical and economic outcomes are evaluated by reviewing electronic medical record and out-patient prescription drug claims up to 12 months following interventions. Primary outcome measures include the number and types of identified problems, the rate of resolution of the problems, and cost savings to the patient and to SWHP.

Results: 543 members participated in comprehensive medication reviews in 2011. Pharmacists provided an average of 8.5 recommendations per member, of which 38% were related to preventive care needs, 35% to drug therapy-related problems, 23% to cost/formulary issues, and 4% to disease management needs. 83% of drug-related interventions were resolved within 12 months of intervention. Economic analysis revealed significant reductions in member copayments ($18.93 PMPM) and in total drug costs ($42.04 PMPM).

Conclusions: The SWHP Medicare Part D MTM Program in 2011 resulted in the resolution of identified drug-related, preventive care, and disease management problems. Significant cost savings were observed in patient copayments and total drug costs, and there was a trend towards cost savings to SWHP.


R-38 Satisfaction and Perception of Pharmacological Treatments for Insomnia among the Elderly
Elaine Bec, Julie Adkison, Memorial Hermann Southwest, Houston, TX.

The objective of this study is to evaluate the satisfaction and perception of the effectiveness of insomnia treatment in an ambulatory care elderly population within the Memorial Hermann Healthcare System. Due to the lack of consensus guidelines, standard of care for medication use has not been created. Because of the variability in the management of this disorder as well as the high incidence of persistent insomnia, especially in the elderly, therapy should be reassessed regularly. This study was submitted to the Institutional Review Board for approval before data collection commenced. Eligible patients were determined through the electronic medical records of the Physicians at Sugar Creek clinic to identify individuals age 65 years and older who have been diagnosed with insomnia, are currently on insomnia medications, and who have a scheduled clinic appointment during September 2011 through February 2012. During their appointments patients were provided a voluntary and anonymous sleep survey. Exclusion criteria include patients who did not complete the sleep survey, have mental retardation, or do not speak English. Surveys will be analyzed for baseline characteristics such as age and/or gender, and length of insomnia disorder as well as insomnia medication usage, and treatment outcomes. Satisfaction with treatment and perceived effectiveness of treatment was rated by the patient using survey questions based on a 4-point Likert Scale. Data analysis is currently in progress. Of the 148 surveys, 105 will be included.

R-39 Cultures, outcomes, and using guidelines in hospitalized pneumonia patients: the COUGH study
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Not previously presented

Background: Hospital-acquired pneumonia is the second-most common healthcare associated infection, and inappropriate initial antibiotics can lead to increased cost, morbidity and mortality. The 2005 American Thoracic Society and Infectious Disease Society of America (ATS/IDSA) guidelines for the management of hospital-acquired, healthcare associated, and
ventilator associated pneumonia (HAP, HCAP, and VAP, respectively) recommend initial therapy with an antipseudomonal beta lactam plus an antipseudomonal fluoroquinolone or aminoglycoside, plus a drug active against MRSA. Data conflict regarding the etiology of HCAP and the optimal initial therapy.

Objectives: The purpose of this study is to retrospectively determine the percentage of organisms isolated from patients with pneumonia that are susceptible to empiric antibiotics at Scott & White Memorial Hospital.

Method(s) or Procedure(s): This study is a retrospective chart review examining 300 patients with ICD-9 codes corresponding to pneumonia between June 2010 and October 2011. Patients with concomitant positive respiratory bacterial culture, blood culture, or urine antigen test for L. pneumophila or S. pneumonia were included.

Result(s): One hundred of the planned 300 cases of pneumonia with positive culture results were reviewed. Overall, 62 patients were found to have HCAP, 4 with HAP, 0 with VAP, and 34 CAP. S. pneumoniae was the most prevalent organism, followed by S. aureus and Pseudomonas spp. The empiric regimen was active against the pathogenic organism in 94% of cases. Coverage of Pseudomonas spp. or methicillin-resistant S. aureus was necessary in 12% (4/34) and 3% (1/34) of patients with CAP, respectively, and in 19% (13/62) and 21% (13/62) of patients with HCAP, respectively. Two cases were identified in the HCAP cohort where non-beta lactam therapy was necessary in addition to the beta lactam for activity against the isolated gram negative organism.

Conclusion(s): The etiology of organisms cultured from patients from HCAP and HAP appear to differ from patients with CAP in our institution. Empiric therapy that did not cover the cultured organisms was found at a lower rate (6%) in this study compared to a similar study. There were only two cases which required double coverage against resistant gram negative pathogens, which suggests that routine double coverage for patients with HCAP may not necessary in our institution.

Disclosure(s): None.

R-40 Association Between anticholinergic Burredena nd Hospital Length of Sty in Older Adults
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Background - Medications with anticholinergic properties are associated with physical and cognitive decline in the geriatric population. Side effects are often not the result of a single drug, but the cumulative exposure of multiple medications. Several ratings scales have been proposed to quantify drug burden, but no published study known of to date has investigated the association between anticholinergic burden and hospital length of stay.

Objective - To evaluate the association of anticholinergic burden with hospital length of stay in geriatric patients.

Methods - Patients 65 years of older admitted to CHRISTUS Santa Rosa for at least 4 days who were discharged between the dates of August 1-October 31, 2011 were included in this retrospective study. Admissions occurring within 14 days of a prior hospital discharge were excluded. Electronic medical records were used to collect the following information: length of stay, demographic data, admission and discharge diagnosis, comorbidities, falls, pressure sores, admissions per year, and medications administered. A modified Anticholinergic Drug Scale was used to calculate each patient’s anticholinergic burden which was compared to hospital length of stay.

Results- A Pearson correlation showed that anticholinergic burden was significantly related to hospital length of stay (p = 0.029), but this significance was lost after controlling for confounding variables (p = 0.1).

Conclusion- Limitations may have prevented us from retaining the significant correlation after controlling for confounding variables. The patient data collected in this study will be incorporated into a large sample population for a future study with the same objective.
Disclosures: None of the authors have anything to disclose.

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STUDENT CATEGORY

S-1 Effect of Intravenous Colistin Dose on Patient Outcomes in Gram-Negative Infection
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Student Poster Category
Not previously presented

Background: Due to the increasing incidence of multidrug-resistant bacteria and lack of new antimicrobials, there has been a reemergence of older drugs such as colistin. Currently, the colistin dose prescribed varies remarkably.

Objective(s): The objective of this study is to identify the prescribing patterns of colistin at St. Luke’s Episcopal Hospital (SLEH) and evaluate the effects of different colistin dosing schedules on mortality.

Method(s) or Procedure(s): The study is a retrospective chart review. All subjects were > 18 years old and received a minimum of 72 hrs of intravenous (IV) colistin drug therapy. All patients had at least one microbiologically confirmed infection due to a gram-negative organism. The primary outcome is all-cause 30-day mortality.

Result(s): Of the 79 patients with CrCl>80 ml/min, 47 received a lower than recommended (5 mg/kg/d) dose of colistin, whereas only 11 and 3 received recommended or higher doses, respectively. Thirty-five of 79 (44.3%) patients with CrCl 30-80 ml/min and 9 of 40(22.5%) patients with CrCl <30 ml/min received the recommended colistin dose (2.5-3.8 mg/kg/d and 2.5 mg/kg/d, respectively). The remainder of patients in both groups received doses that were either higher or lower than what is recommended. Patients receiving a lower than recommended dose of colistin had a significantly higher 30-day mortality (p=0.04).

Conclusion(s): The majority of patients included in this study received a dose other than the recommended dose of colistin. Correct dosing may be important in improving patient outcomes and survival.

Disclosure(s): The author has nothing to disclose.

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S-2 Texas Society of Health-System Pharmacists
Student Section Executive Committee
T Nichols, C Tan, C Anderson, E Bernardo, A Diamantopoulos, A Fowler, N Fry, S Fuller, B McNulty, H Muoneke, O Okafor, T Patel, S Pourali, S Rao, S Sen, G Smith, L Thurman, K Weatherspoon
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San Antonio, Texas
Previously presented at ASHP Midyear Clinical Meeting, December 2011

Background: The Student Section Executive Committee (SSEC) was approved by the Texas Society of Health-System Pharmacists (TSHP) Board of Directors in 1997, but it was not until the 1998-1999 academic year that the SSEC became an official council. The council originally consisted of representatives from student society chapters of the University of Texas, Texas Tech University, University of Houston, and Texas Southern University Colleges of Pharmacy. Today, the council consists of representatives from all six Texas student society chapters. School representatives consist of the student society chapter president and two additional members from each university. The chair and vice chair of the executive committee are elected by the previous year’s committee members.

Objective: The objective of this poster is to describe the SSEC and its role, while encouraging other states to develop a similar committee utilizing Texas as a model.
Methods: Not applicable.

Results: The SSEC worked on various projects throughout the year to fulfill its objectives. Initiatives included the development of student programming for the TSHP Annual Seminar; organization of two statewide projects, Antibiotic/Antiviral Awareness and Medication Safety Awareness; promotion of ASHP National Hospital and Health-System Pharmacy Week; encouragement of the TSHP Mentor/Mentee program; production and distribution of the TSHP student member e-newsletter; and the conductance of monthly conference calls.

Conclusion: Over the past eleven years, the SSEC has endeavored to foster leadership, collaboration, and involvement among pharmacy students across Texas. As a result, involvement at the state level has improved pre- and post-graduation. Students have been able to develop their professional and leadership skills by creating and implementing statewide programs with participation from all of the Texas pharmacy schools. Through these collaborative efforts, networking among students, new practitioners, and other pharmacists has increased. The SSEC looks forward to further growth and continuing to serve as a voice for students.

Disclosures: Not applicable.

S-3 Antibiotic and Antiviral Awareness: A Statewide Education Initiative to Decrease Antibiotic Resistance
T Nichols, C Tan, C Anderson, E Bernardo, A Diamantopoulos, A Fowler, N Fry, S Fuller, B McNulty, H Muoneke, O Okafor, T Patel, S Pourali, S Rao, S Sen, G Smith, L Thurman, K Weatherspoon
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Not previously presented

Background: Healthcare facilities and communities continue to witness an increasing trend in multidrug-resistant infections. To combat this dangerous trend, healthcare providers must become proactive in educating the public about the consequences of antibiotic resistance. Through a statewide initiative conducted over the past four years, the Student Section Executive Committee (SSEC) provides education to our local communities on the appropriate utilization of antibiotics to prevent antibiotic resistance and the spread of infection. The SSEC also promotes preventative strategies such as vaccinations and proper hand-washing techniques.

Objective: The objective of this poster is to educate seminar attendees about the SSEC’s methods for educating communities on the consequences of antibiotic resistance, as well as the steps they can take to prevent resistance and the spread of infection. Additionally, the committee encourages the use of vaccinations as a means to prevent the spread of the H1N1 and seasonal flu.

Methods: The SSEC sought to develop educational resources for each Texas SSHP chapter on topics regarding bacterial/viral infections, appropriate antibiotic use, vaccinations, and other disease prevention methods. SSEC members worked in committees to assemble various community programs utilizing a variety of resources including the Centers for Disease Control and Prevention, Mayo Clinic, The Journal of the American Medical Association, and flu.gov.

Results: Targeted audiences included children (pre-kindergarten through 5th grade) in daycare centers, local elementary schools, and after-school programs; adults (college students and parents of elementary children involved in the children’s programs) in local communities; and employees of local health-system facilities. Materials utilized included Germ Juice hand washing kits, games, informational pamphlets; refrigerator magnets, hand sanitizers, PowerPoint presentations.

Conclusion: To further reinforce pharmacists’ roles as advocates for proper healthcare and medication use, the SSEC educates community members on simple strategies to prevent the spread of infection and decrease antibiotic resistance. Furthermore, it is vital to promote awareness of the H1N1 and seasonal flu vaccinations to combat the spread of these infections. The educational programs have been well received by the community, and the SSEC looks forward to continuing this annual initiative in the future.
Disclosures: Not applicable.

S-4 Medication Safety Awareness: A Statewide Education Initiative to Promote Safe Medication Use and Disposal
T Nichols, C Tan, C Anderson, E Bernardo, A Diamantopoulos, A Fowler, N Fry, S Fuller, B McNulty, H Muoneke, O Okafor, T Patel, S Pourali, S Rao, S Sen, G Smith, L Thurman, K Weatherspoon
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Not previously presented

Background: Whether attributed to misuse or accidental ingestion, medication-related adverse events are on the rise. Currently, over 700,000 visits to the hospital are due to drug-related adverse events and approximately 80% of emergency department visits among children under 18 years of age is attributed to medication poisoning. Fortunately, strategies are available to help minimize the number of adverse events associated with medications. As healthcare professionals, it is important that we provide education on how to appropriately take, administer, store, and discard medications to prevent drug-related adverse events.

Objective: To educate seminar attendees about our methods for enhancing the public’s understanding of medication safety concerns and to provide strategies to minimize and prevent future medication-related adverse events.

Methods: Each student society created a variety of medication safety programs tailored to the needs of its local community. The information disseminated was gathered from a variety of sources including the Centers for Disease Control and Prevention, the Generation RX Initiative, and the Drug Enforcement Agency (DEA).

Results: The Medication Safety program currently targets elementary-aged children, patients discharged from the hospital, and community members. Students discussed the role of a pharmacist, the importance of proper medication usage and storage, and the dangerous effects of medications when not taken appropriately. Members emphasized the concept that medications are not candy, and only medications deemed appropriate by parents should be taken. Students participated in a Medication Take Back program, sponsored by the DEA, by holding up signs encouraging residents to bring their unwanted/unused/expired medications, including controlled medications, for proper disposal.

Conclusion: Educating our communities about medication safety and providing proper avenues for disposal are essential to prevent medication-related problems. It is important that pharmacists take a pivotal role in educating the public on the hazards of medication errors and inappropriate disposal. While the current SSEC medication safety initiative is a promising start, our program continues to grow and evolve to reach a variety of communities and populations across Texas.

Disclosures: Not applicable.

S-6 The rewarding effects of nicotine are enhanced in diabetic rats, an effect that appears to be mediated via suppressed dopamine systems.
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Not presented before

Background: Smoking cessation is fundamental in facilitating glycemic control and limiting further diabetic complications. However, it is presently unclear whether patients with diabetes are more prone to tobacco abuse relative to healthy persons and whether dopamine systems modulate this behavior as is generally accepted. Understanding tobacco abuse vulnerability in patients with diabetes is crucial in tailoring effective smoking cessation treatments.
Objective: Are diabetic rats are more vulnerable to tobacco abuse compared to healthy rats; and is enhanced vulnerability mediated via dopamine systems.

Methods: Diabetes was induced via administration of streptozocin (STZ). We compared nicotine reward using extended access to self-administration procedures in chambers where the rats had access to food, water, and nicotine or saline self-administration for 10 days. Dopamine transporter (DAT) and D1 and D2 receptors levels were assessed in the NAc using Western blot procedures.

Results: Diabetic rats displayed enhanced nicotine intake as compared to healthy controls. A robust increase in food and water intake relative to controls, as expected was also noted. A decrease in D1 receptors in the NAc of diabetic rats that self-administered nicotine was seen as compared to healthy control rats self-administering saline. There were no significant changes in DAT or D2 receptor levels.

Conclusion: Our findings suggest that diabetic animals display enhanced rewarding effects to nicotine which may contribute to enhanced tobacco abuse. Taken further our studies suggest that contemporary smoking cessation programs may not benefit patients with diabetes and dopamine regulation may be key in tailoring their treatment plan.

Disclosure: None This work was supported by the UTEP BBRC (5G12 RR00

S-7 Evaluation of Combination Colistin Therapy Utilized in a Tertiary Care Center
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Not previously presented

Background: Due to the increasing incidence of multidrug-resistant gram negative bacterial infections and the lack of novel antimicrobials, practitioners have reconsidered colistin as a therapeutic option for severely resistant infections. Appropriate combination treatment has not been fully defined despite increased use. In vitro studies have shown that combination therapy provided optimal bactericidal activity against MDR gram negative infections.

Objective: To identify the effect of colistin in combination antibiotic therapy on mortality in patients with infection caused by MDR gram-negative organisms.

Method(s): This study is a retrospective chart review, approved by the Institutional Review Board, that included patients admitted to St. Luke’s Episcopal Hospital that received colistin from January 2007 to June 2011. Patients in the study had at least one microbiologically confirmed infection with a gram negative organism. Data collected included a variety of factors such as comorbidities, 30-day survival, renal function, colistin dosing and concomitant antimicrobial agents.

Results: The majority of patients with a Pseudomonas infection received combination colistin therapy with 1-3 other agents, while those with Klebsiella or Acinetobacter infections more frequently received colistin monotherapy. Tigecycline and carbapenems were the most frequently added agents to colistin therapy. Despite in vitro studies suggesting superiority of combination therapy, our preliminary analysis suggests that there is no significant difference in mortality as compared with monotherapy.

Conclusions: While no difference in mortality was seen, further investigation into specific combinations with colistin for use in Gram negative bacteria is needed.

Disclosure(s): The authors do not have any disclosures.

S-8 Analysis of Online Patient Information Resources for Complementary and Alternative Medicine
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University of the Incarnate Word – Feik School of Pharmacy, San Antonio, Texas
Not previously presented

Background: Emerging technology gives patients access to many online resources about complementary and alternative medicine (CAM). Healthcare professionals often debate which online patient resource provides correct information and can be easily accessible.

Objective: To analyze and compare online patient information resources to a healthcare professional information resource regarding CAM in order to establish a reliable patient information resource to recommend to patients.

Method(s): Five online patient information resources (NCCAM, NIH:ODS, Pharmacy Times, Wikipedia, and WebMD) were compared to one resource (Micromedex). Data were collected from each electronic database on the following CAM therapies: fish oil, garlic, ginseng, soy, resveratrol, acupuncture, and tai chi. The evaluation of each resource was based on the correctness, clarity of content, ease of use, and the Flesch-Kincaid reading level.

Result(s): The NCCAM resource contained all of the CAM and ranked the highest in the correctness of the information (8), clarity of content (9), ease of use (8) and had the lowest Flesch-Kincaid reading level (10.6). The Wikipedia resource did not contain all of CAM and obtained the lowest grade correctness of information (6), clarity of content (5), ease of use (4), and had the highest Flesch-Kincaid reading level (15.3).

Conclusion(s): NCCAM is the most accurate and easily navigated source for patient online CAM information. It should be recommended by healthcare professionals to patients.

Disclosure(s): None

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S-9 Construction of an interdisciplinary HIV patient care model based on joint evaluations of nutritional and medication related HIV treatment regimen barriers
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Not previously presented

Background: Several environmental factors (for example, degree of social stigmas, scarcity of community HIV services, in addition to others,) may contribute to poor patient outcomes with HIV treatment. The Ryan White Grant funds various services for managing HIV, including a specialized medical nutrition therapy (MNT) program in the Houston area run by the Houston Buyer’s Club/Expert Nutrition. This dietitian-staffed program helps patients manage the side effects from their HIV medications. This line of work seems to have potential to complement pharmacists’ efforts in medication therapy management as both initiatives target medication adverse effects and other issues such as patient adherence to a HIV treatment regimen.

Objective(s): To analyze the specialized MNT program’s design for nutritional assessment of HIV patients and the responses from a HIV medication use-related inquiry about access and adherence issues to develop an interdisciplinary care model that improves overall health outcomes for HIV patients.

Method(s): This study is currently awaiting IRB approval at the University of Houston. Eligible subjects will consist of HIV patients at the Thomas Street Health Center, a facility of Harris County Hospital District. These patients will include those enrolled in Expert Nutrition’s MNT program as well as those who were not. There is an expected enrollment of 50-60 participants. The non-MNT program patients will serve as the control for the effect of the program and nutritional supplement use on HIV patient health outcomes. Enrolled subjects will be asked to participate in a study survey, different from the MNT program’s survey. The study survey covers broader topics than the MNT survey, which focuses on the outcomes
from a specific program. Questions of the study survey will be focused on use of nutritional supplements, medication adherence as well as accessibility to HIV medications. Survey findings along with the MNT program survey will be reviewed to construct a patient care model that takes into consideration relevant factors that affect adherence to HIV treatment regimens so that appropriate recommendations can incorporate more of an integrated approach to HIV patient care. This is important because there is currently limited information regarding the effects of and models for combining pharmacy and dietetic approaches to HIV patient care.

Results(s): In progress

Conclusions(s): In progress

Disclosure(s): Authors have no disclosures.

S-10 Calcium phosphate compatibility in parenteral nutrition: a helpful guide for pharmacists
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Previously presented at the Annual American Society of Health System Pharmacists Midyear Clinical Meeting and Exhibition, New Orleans, LA, December 7, 2011

Background: Calcium phosphate precipitation within parenteral nutrition (PN) remains the greatest risk for patient safety and safeguards within pharmacy have been unsuccessful in preventing patient harm based upon the medical literature. Since calcium phosphate precipitation is dependent on the brand of amino acids used, final concentrations of dextrose and amino acids, temperature and final PN pH, the recent multitude of drug shortages affecting PN has required many pharmacies to switch brands of amino acids thus leading to potential for errors in preventing this incompatibility.

Objective: Design a process to assist MD Anderson’s nutrition support team (NST) and pharmacists in checking the limits of calcium and phosphate to be added into the PN formulations based upon the specific brands of amino acids utilized, as well as final dextrose concentrations.

Methods: MD Anderson’s NST, consisting of board certified nutrition support pharmacists and dietitians, as well as 4th year pharmacy students, evaluated the commercially available amino acids (8%, 10% and 15%) utilized at our institution and amounts incorporated into our standardized PN formulations based upon our order form (86 patients and 639 orders over a 1 month time period). These were used to develop calcium phosphate compatibility charts from the available published literature or manufacturers of the commercially available amino acids in conjunction with our online PN calcium phosphate calculator (previously internally developed). Our NST and pharmacy staff was provided these online compatibility charts to assist in determining the safety of the prescribed PN formulations. We evaluated our current system for calcium phosphate incompatibilities through periodic assessment of PN orders completed daily.

Results: The inpatient pharmacy computer system within MD Anderson did not have the capability to determine calcium phosphate compatibility of a given PN formulation, thus the charts provided allowed our NST and pharmacy staff the information to determine if the amounts incorporated were safe for patient administration. Our current system provided 100% reassurance of calcium phosphate compatibility in our PN formulations.

Conclusions: There are relatively few studies available regarding the safety of the process of ordering and compounding PN with regards to calcium and phosphate compatibility. Standardized calcium phosphate compatibility charts for our PN formulations were successful in preventing incompatible formulations.

Disclosures: Sofya Mnjoyan has nothing to disclose. Todd Canada is a consultant for Baxter Healthcare Inc.
S-11 Title: Comparison of research project quality between first-year and second-year pharmacy residency research projects: a cross-sectional review of abstracts presented at the 2011 Alcalde Residency Conference
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Background: Research projects are a major component of postgraduate residency training. High quality research projects can lead to national conference presentations and publications, which are advantageous for candidates entering a competitive job market. Little information is available for students and residents to compare the quality of research conducted at residency programs. Therefore, a systematic review of research project quality is needed.

Objective: The primary objective is to compare the quality of postgraduate residency research projects conducted by primary authors in the first year of residency versus those in the second year of residency. A secondary objective is to compare the quality of research between small residency programs (1-5 residents) and large residency programs (6 or more residents).

Methods: A cross-sectional study will be conducted which includes all abstracts accepted at the 2011 Alcalde Residency Conference. Abstracts will be excluded if information cannot be obtained for the size of the residency program or the year of training for the primary author. Information about the residency program size and resident year of training will be obtained from American Society of Health-System Pharmacists online residency directory and from individual residency program websites. The quality of the abstracts will be evaluated using a standardize quality scoring instrument which will yield a numerical score. Each abstract will be reviewed independently by two investigators. Abstract quality scores will be reported as medians with interquartile ranges and compared using the Mann-Whitney test. An alpha of 0.05 will be set for statistical significance.

Results: Pending

Conclusions: Pending

Disclosure: The authors have nothing to disclose financially or otherwise.

S-12 Utilization of Peptide Nucleic Acid Fluorescence in-situ Hybridization (PNA FISH®) in Guiding Antifungal Therapy in Candidemia
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Introduction: Candida species are the fourth common cause of bloodstream infections and convey a high mortality risk. Fluconazole is the mainstay of therapy for candida infections except for C. glabrata and C. krusei. A novel diagnostic method known as peptide nucleic acid fluorescence in situ hybridization (PNA FISH) is a rapid identification method for determining the species in a positive blood culture. PNA FISH could be beneficial for de-escalating therapy and patient outcomes.

Objective: To evaluate the utilization of PNA FISH for identification and guiding appropriate antifungal therapy for candidemia in the Methodist Health System.

Methods: A retrospective analysis was performed on patients with candidemia from January 2010 to December 2011 evaluating pre and post-PNA FISH periods. Patient demographic information, length of stay, laboratory identification results, time to identification, and antifungal therapy were collected.

Results: Overall 64 patients had confirmed candidemia by both PNA FISH and standard identification. C. albicans (45%) and C. glabrata (35%) were the most common identified species. The mean time to PNA FISH identification was 9.2 ± 6.5 hours compared to 103.3 ± 57.7 hours for standard identification. Fluconazole was the initial therapy started in 50% of the patients.
with C. glabrata. In 12 out of 14 cases (86%), PNA FISH and standard susceptibility identification warranted therapy change. The mean time to change therapy in relation to PNA FISH identification was 3.6±7.2 days.

Conclusions: C. glabrata was the second most common candida species causing bloodstream infections. A proposed algorithm was developed for candidemia management utilizing PNA FISH technology to rapidly and accurately identify candida species.

Disclosures: Authors have nothing to disclose.

S-13 Targeting Cervical Cancer Prevention in an Uninsured/Underinsured Patient Population
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Not Previously Presented

Background: The incidence of cervical cancer is much lower in the United States due to increased access to preventative measures. However, health disparities have been identified with Hispanic and African-American women being 50% and 30% more likely to be diagnosed with cervical cancer and at increased risk from dying from their disease when compared to Caucasian women. Harris County, with nearly 33% of its patient population uninsured, has greater increases in cervical cancer incidence among Hispanic and African-American women.

Objective: The primary purpose is to determine the rates of cervical cancer diagnosis and staging among women in the Harris County Hospital District (HCHD) based on age, race, and screening efforts.
Methods: This retrospective study evaluated all women who were treated for cervical cancer at HCHD in the Gynecology Oncology Clinic at Ben Taub General Hospital (BTGH) between 2000 and 2011. Data collection included demographics, cervical cancer risk factors, histopathology, and cancer diagnosis and treatment.

Results: 68% of women treated at BTGH for cervical cancer had not received any screening prior to their diagnosis. Of these women, the majority were diagnosed with cervical cancer staged IB2 or greater.

Conclusions: The majority of patients in the HCHD do not receive proper screening for cervical cancer. As a result, cervical cancer in these women is diagnosed at later stages leading to more complex treatments and poor outcomes. Future focuses on prevention with vaccinations as well as increased screening efforts may prevent these alarming rates of cervical cancer in this underinsured/uninsured population.

Disclosures: None.

S-14 Incidence and Severity of Antibiotic Associated Diarrhea in Hospitalized Patients Tested for Clostridium difficile Infection
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Not previously presented

Severity and underlying risk factors for non-Clostridium difficile antibiotic-associated diarrhea (AAD) is poorly understood. The purpose of this study was to assess incidence rate of AAD among patients tested for C. difficile, to determine the severity of AAD, and to determine variables that may identify a patient at high-risk for severe AAD.

We conducted a prospective cohort study of patients admitted with diarrhea who tested negative for C. difficile. AAD was defined as any unformed stool plus antibiotic use in the previous 7 days. Patients were categorized based on number of bowel movement in 48 hours surrounding the toxin test as having severe, moderate or mild diarrhea. Antibiotics were categorized as having significant or minimal coverage against anaerobic bacteria in general or Bacteroides species, specifically.
Four hundred fifty eight patients had a negative C. difficile test during the study period of whom 230 met inclusion criteria. 132 of 230 (57%) met our definition of AAD. Of the 132 AAD patients, 82 (62%) had severe diarrhea, 25 (19%) had moderate diarrhea, and 25 (18%) had mild diarrhea. Use of anti-anaerobic antibiotics or anti-Bacteroides antibiotics was not associated with an increased risk of severe AAD.

In conclusion, 57% of patients that tested negative for Clostridium difficile met our definition of AAD. Severe AAD was present in the majority of patients although predictive risk factors were not identified. Further research into non-Clostridium difficile AAD is needed.

The authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:

Kevin W. Garey: Merck & Co, Inc and Astellas Pharmaceuticals

All other authors: Nothing to disclose

S-15 UT Student Society of Health-System Pharmacists Newest Committees
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Background: The Transplant Committee is a committee created this year to establish professional relationships with clinical pharmacists and community organizations, and to promote awareness about organ donation by educating the public. The purpose of this committee is to provide students with an opportunity to explore transplant pharmacy, to learn about organ donation, and to participate in community outreach as volunteers at organ donation drives. In addition, this committee offers learning opportunities for students about the process of organ donation, the donation registry, and steps to become a donor. The Health Alliance Committee’s goals were to stress the importance of trans-disciplinary practice for optimal health outcomes through leadership, shared goals and values, communication and the degree of knowledge, and quality of perception about other health care fields.

Objectives: The objective of this poster is to show other students and practitioners the activities that UTSSHP has done this semester, in hopes they may take inspiration for their own chapters or institutions in starting similar committees and events.

Method(s) or Procedure(s): The Transplant Committee organized events that included a Texas Organ Sharing Alliance presentation, dinner with a pharmacist, and organ donation drive to educate students and members of the committee about the importance of organ donation and transplant pharmacists. The Health Alliance Committee appointed various leaders in different health professions to organize monthly meetings among students to discuss disease states and the role of their profession.

Result(s): Not Applicable.

Conclusion(s): Both Transplant and Health Alliance committees have been successful this year. The Transplant Committee has reached a wide audience by informing and registering members from the community for organ donation. The Health Alliance has formed an inter-collaborative team to open the lines of communication across health care disciplines.

S-16 Factors Contributing to Fourth-Year Pharmacy Students’ Decision to Pursue Pharmacy Residency
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Not previously presented
Background: The ACCP and ASHP have established a vision that PGY1 residency training should be required for entry into practice for all pharmacists who will serve in direct patient care roles. Several studies have utilized surveys to assess factors motivating residents’ decision to pursue residency training. However, a search of the literature does not reveal any assessments of pharmacy students in the final year of their curriculum, completing APPE rotations, with factors which may influence their pursuit of residency training. This research contributes to filling this gap.

Objectives: To assess the relationship between fourth-year pharmacy students’ various experiences, and whether or not they influenced the student’s decision to pursue residency training.

Method(s) or Procedure(s): An electronic survey instrument regarding personal demographics, pharmacy-based experiences and organizational activities, along with APPE rotations completed/to be completed was e-mailed to fourth-year pharmacy students at the University of Houston, College of Pharmacy (UH COP), at the mid-point of completing their APPE rotations.

Result(s): Of 128 surveys e-mailed, 117 were completed, yielding a response rate of 91.4%. Prior to starting APPE rotations, 66 respondents (56.4%) indicated that they considered pursuing residency training after graduation. After completion of three APPE rotations, 76 respondents (65%) indicated they did not plan on pursuing residency training, and of these respondents, 15 (19.7%) were considering this possibility after graduation.

Conclusion(s): Results of this survey indicate that APPE rotation experiences may play an important role as to whether or not students in the last year of their curriculum decide to pursue residency training.

Disclosure(s): Nothing to disclose.
Free CE credits. Available 24/7.

Now pharmacists can get continuing education credit for the Pharmacy, Children with Diabetes, Children with Asthma, Atopic Dermatitis, and Exercise-Induced Dyspnea courses and learn more about Texas Health Steps (Medicaid for children) and other health-care services with Texas Health Steps Online Provider Education. Developed by the Texas Department of State Health Services and the Texas Health and Human Services Commission, this comprehensive program offers continuing education hours for health-care providers, including pharmacists. All courses are accredited for eligible participants.*

*The University of Texas at Austin College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. The five knowledge-based course topics above are approved for 1 CEU (1 contact hour) of pharmacy continuing education credit each. Other courses are accredited by the Texas Medical Association, American Nurses Credentialing Center, National Commission for Health Education Credentialing, Texas State Board of Social Worker Examiners, UTHSCSA Dental School Office of Continuing Dental Education, Texas Dietetic Association, Texas Academy of Audiology, and International Board of Lactation Consultant Examiners. Continuing Education for multiple disciplines will be provided for these events.

Courses Accredited for Pharmacy CE Credit Include:
- Pharmacy
- Children with Diabetes
- Children with Asthma
- Atopic Dermatitis
- Exercise-Induced Dyspnea

Other CE Courses Include:
- Newborn Screening
- Case Management
- Texas Health Steps Overview
- Pediatric Depression
- High Blood Pressures in the Office
- Gastroesophageal Reflux in Infants
- Referral Guidelines Overview
- Many others

To view courses online, visit www.txhealthsteps.com.
Background: United States healthcare system’s current issue is primary care shortages. Physicians are pursuing more lucrative specialties instead of primary care. Regulatory healthcare reform and the retirement of the baby boomer population will cause an increased need for primary care. National healthcare costs are increasing annually. Compare non-physician healthcare provider education to pharmacists. Within healthcare, pharmacy itself faces various dilemmas: increased supply of pharmacists and schools, mail order and automation, limited authority in patient care, and physician drug dispensing. Healthcare and pharmacy problems need to be monitored, while brainstorming solutions to help improve patient care.

Objectives: The objective of this poster is to educate pharmacy practitioners and seminar attendees about the current state of the pharmacy profession and potential opportunities to improve primary care in the United States healthcare system by expanding the scope of the pharmacist role.

Method(s) or Procedure(s): Information from the Journal of the American Medical Association, and other tertiary sources will be provided via poster display to encourage pharmacy practitioners and seminar attendees with engaging in open discussions for resolutions in cultivating pharmacy and healthcare to be a more efficient and effective process.

Result(s): Not applicable.

Conclusion(s): Various issues identified in pharmacy and healthcare. Potential solutions show pharmacists can take on an expanded role in clinical settings and would have positive implications in the primary care field. Additionally, expansion on an extensive pharmacy curriculum may allow for the possible expansion on scope and authority. This expansion of the pharmacist role addresses multiple pharmacy and healthcare issues.

Disclosure(s): Daniel A. Nguyen has nothing to disclose. Christina N. Vo has nothing to disclose.

S-19 Lorazepam plus Haloperidol for Psychotic Agitation? A Critical Look at a Common Practice
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Not previously presented

Background: Psychotic agitation is a behavioral emergency in which a patient poses a danger to self or others. When non-pharmacologic interventions for de-escalation fail, emergency medications may be required. The Food and Drug Administration (FDA) has recently approved aripiprazole, ziprasidone, and olanzapine for parenteral treatment of agitation, but haloperidol plus lorazepam continues to be the preferred treatment. The recent shortage of parenteral lorazepam forces practitioners to evaluate alternatives and reconsider the evidence for lorazepam use in psychotic agitation.

Objective: To evaluate studies comparing the efficacy of combination intramuscular lorazepam and haloperidol versus haloperidol or lorazepam alone in the treatment of psychotic agitation.

Methods: A literature search was conducted using the terms psychotic agitation AND rapid tranquilization AND haloperidol AND lorazepam. The review focused on the authors’ methodology, conclusions, and limitations. A survey was developed to determine lorazepam use in the management of agitation among our mental health physicians.

Results: Five peer-reviewed articles were included in this review. Three studies compared haloperidol and/or lorazepam to the combination. Two studies evaluated monotherapy haloperidol versus lorazepam. The survey was completed by twenty-two physicians with an average of 13.4 years of experience. The majority indicated that evidence-based literature supports the use of combination lorazepam and haloperidol to produce a faster onset of action.
Conclusions: Based on this review, further research is needed to determine pharmacological treatments for agitation in psychotic disorders. Despite the many references citing these articles, the literature does not support the superiority of lorazepam and haloperidol combination over either agent alone.

Disclosure: LL Williams has nothing to disclose. K Tangu has nothing to disclose.

S-20 Use of Closed-Loop Medication Management Systems (CLMMS) in Texas Medical Center (TMC) Hospitals
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Not previously presented

Background: In 1999, the Institute of Medicine released “To Err is Human”, which revealed that many hospital deaths are due to preventable medication errors. 1 A CLMMS is designed to feed outcomes from the medication use process back into the system, allowing for future improvements and changes in a patient’s course of care.2, 5

Objectives: To describe medication management systems (MMS) in a sample of TMC hospitals. To determine the barriers associated with operating a closed-loop medication management system.

Methods: Hospitals included in the study were large TMC institutions with more than 400 beds (N=7). A web based survey was used to collect data on the following MMS (CPOE, ADC, BCMA, EMAR, medication tracking, and robots/medication carousel). Questionnaire also evaluated perceived barrier to implementing a CLMMS. The percentage of hospitals will be viewed as those who operate a CLMMS compared to the TMC hospitals who do not utilize all four MMS (CPOE, ADC, EMAR, and BCMA). Representatives from each eligible hospital were sent a link to the online survey. Descriptive statistics (frequency) were used to address the study objectives. Identifying barriers to implementing a CLMMS may increase the number of TMC hospitals that utilize CLMMS, resulting in reduced medication errors and long-term cost savings.

Results: The survey showed that 57.1% (N=4) of the TMC hospitals surveyed met the criteria for operating a CLMMS.

Conclusion: All TMC hospitals surveyed have future plans to implement medication management systems in order to close the loop.

Disclosure(s): N/A

S-21 Infectious Complications Following Rituximab Administration in Renal Transplant Recipients
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Not previously presented

Background: Rituxan (Rituximab) is a B-cell depleting antibody traditionally used in the treatment of cancers. Rituximab has been used off-label in kidney transplant patients for a variety of indications. There is currently conflicting data regarding the occurrence of infections with Rituximab use in kidney transplant recipients.

Objective: To determine the incidence of infectious complications in renal transplant recipients treated with Rituximab as compared to those treated with traditional regimens.

Method(s) or Procedure(s): A retrospective study was conducted of all kidney transplant recipients from January 4 to July 29, 2010 at The Methodist Hospital. Medical records were reviewed for infectious complications occurring from the time of transplant until July 2011. Categorical variables were compared with Chi Square tests and continuous variables were analyzed using ANOVA testing.
Result(s): The Rituximab group had a 50% rate of infection, compared to 46.25% in the control group (p = NS). Viral, bacterial, and fungal infections occurred at rates of 33.3%, 33.3%, and 8.33%, respectively, in Rituximab groups versus 28.75%, 28.75%, and 3.75% in the control group (p = NS). Rituximab patients developed BK nephropathy at a significantly higher rate (25%) than control patients (2.5%, p = 0.0099).

Conclusions: Though there was a slightly higher rate of infections in Rituximab-treated patients, the differences were not statistically significant. The significantly higher rate of BK nephropathy in Rituximab patients merits further investigation. Validation with a larger cohort of patients is warranted.

Disclosures(s): The authors have nothing to disclose.

S-22 Daptomycin Usage Evaluation in the labor & delivery department at a community hospital
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Not previously presented

Background: Antibiotic stewardship is an important tool for hospitals and pharmacy departments to utilize in order to achieve better patient outcomes and less antimicrobial resistance. MUE's can be used effectively to analyze the antibiotic usage in a medical setting to optimize medication regimens.

Objective: To evaluate the appropriate usage and cost-effective treatment of patients with daptomycin versus other similar available therapies at a small rural community hospital.

Method(s) or Procedure(s): Utilized a retrospective chart review of 14 cases treated with daptomycin at a small, rural community hospital. Data collection included demographic and clinical information, such as diagnoses, concurrent antimicrobial therapies, as well as culture and sensitivity results. A cost analysis was carried out to compare the cost of daptomycin therapy, versus other similar agents.

Result(s): 40% of patients treated had vancomycin-sensitive methicillin resistant Staphylococcus aureus (MRSA) infections. The infections treated, included cellulitis (60%), pneumonia (28.5%), sepsis (21.4%), UTI (14.2%), osteomyelitis/neutropenic fever 7.1%. The mean daptomycin dose was 359.64 mg ± 116 mg. Mean length of daptomycin therapy was 4.5 ± 2.5 days. The most frequently used concurrent antimicrobial agents included clindamycin (32%), piperacillin/tazobactam (20.4%), cefipime (16.8%), and colistimethate (16.2%). Estimated cost savings was at $15,000.00 over the 4-month duration of the study if comparable agents, such as vancomycin, oxacillin, or clindamycin been employed in place of daptomycin therapy.

Conclusion(s): Daptomycin is an effective, but expensive, agent which should be reserved in cases where other agents such as vancomycin, oxacillin or clindamycin cannot be used. This agent warrants monitoring in an antimicrobial stewardship program.

S-23 Does Incidence of Rash Predict Treatment Response to Lapatinib in Breast Cancer?
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American College of Clinical Pharmacy Annual Meeting, Pittsburgh, PA October 2011

Background: Rash is a common toxicity, occurring in more than 30% of patients receiving lapatinib, a dual inhibitor of EGFR and HER2, for the treatment of HER2-positive breast cancer. Rash is a class adverse effect of drugs that target EGFR and has been associated with superior treatment outcome. This association between rash and treatment outcome has never been shown for lapatinib in breast cancer patients.
Purpose: In this study, we hypothesized that breast cancer patients who develop rash on lapatinib treatment will have a better treatment response.

Methods: We prospectively enrolled 49 patients with locally advanced (≥ 3 cm) HER2-positive breast cancer on a clinical trial of neoadjuvant monotherapy with lapatinib (1500 mg per day for 6 weeks). Patients were followed for incidence of rash and diarrhea, which was graded using NCI CTCAE criteria. Primary endpoint of the trial was overall response rate, assessed by objective bidimensional tumor measurements based on the standard WHO criteria.

Results: Forty-seven patients were evaluated and divided into four groups based on rash (Y/N) and response (Y/N). We found that the proportion of responders among patients with rash was not significantly different from that among patients who did not develop rash (p=1.0, Fisher’s exact test). In systematic review of clinical studies with gefitinib and erlotinib, most studies reported correlation between rash and treatment outcome.

Conclusion: In our study, incidence of rash did not predict clinical response with lapatinib. Lapatinib may not be an effective EGFR inhibitor, based on these studies.

Disclosures: There are no disclosures.

S-24 Impact of Performance of Physical Assessments during Advanced Pharmacy Practice Experiences on Student Confidence and Opinion towards Preparation by Physical Assessment Course
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Not previously presented

Background: Pharmacists’ role continues to expand in the healthcare system and more clinical skills are necessary for a pharmacist to better assess and manage patients. Performing and/or understanding the purpose of physical assessment exams are skills that a well-rounded clinical pharmacist should possess.

Objectives: To determine if 4th year pharmacy students or their pharmacists preceptors performed physical exam techniques during APPE rotations and whether this influenced the students confidence in their abilities or how well the Physical Assessment / Anatomy course prepared them for APPEs.

Method(s) or Procedure(s): 129 UHCOP Class of 2012 students were invited via email to participate in an online survey on the role of physical assessments during APPEs using the Qualtrics survey tool. Participants in this survey were voluntary and would yield a convenience sample. IRB approval was sought and an exemption granted. Data was analyzed using MS Excel.

Result(s): 80 students responded and 71 students completed the survey. 24 students performed PA and 25 students observed their preceptor perform PA on any rotation. 35% of students agreed or strongly agreed to being confident in their ability to perform PA. 37% of students responded that they strongly agree or agree that the PA course prepared them for PA while on APPEs.

Conclusion(s): To further facilitate pharmacy students’ PA skills, more APPE sites should be encouraged to have students perform PA or see a preceptor perform PA in order to increase the students’ confidence in their ability to perform PA.

Disclosures(s): The authors do not have any disclosures.

S-25 Pharmacists and Medication Errors in the Emergency Department
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Not previously presented.

Background: 80% of ER visits result in a medication order with 30% resulting in 3 or more. USP’s MedMARx reported 2000 medication errors in the emergency department in 2001, with 23% detected before reaching the patients. Pharmacists can help decrease the number of medication errors. In 2009 approximately 28.6% of ED used pharmacist services. The role of a pharmacist in an ED includes acquiring patient’s medication history, medication orders review, consultation with doctors and nurses, and participation in medical emergency and codes. Reducing medication errors in an ED can lead to cost-saving benefits for an institution and better patient care.

Objective: To describe the decreased in medication errors in an emergency department with the addition of pharmacy services.

Methods: a PubMed search for relevant studies involving pharmacists and medication errors. Data and information from the studies were extracted and presented. 3 other studies in different practices were also analyzed and presented to serve as a comparison.

Results: not applicable.

Conclusion: Decreasing medication errors is an important goal in an emergency department that can results in improved patient care and significant cost-savings. Pharmacists in three separate studies have been showed to decrease the number of medication errors in an ED.

Disclosure: The author has nothing to disclose.

S-26 Assessment of HCAHPS scores upon implementation of a patient education program in a hospital setting
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Previously presented: ASHP Midyear in New Orleans, Louisiana 2011

Background: When patients are knowledgeable about the medications they are taking, their quality of life increases and disease is likely to slow. Patient education programs are necessary in facilitating this learning process. The patient population served by this particular hospital has a low healthcare literacy rate, underscoring the need for more patient education.

Purpose: The purpose of this study is to evaluate the efficacy of a new patient education program implemented in an acute care hospital setting.

Methods: The patient education program consists of giving each patient admitted to the hospital an information folder. Patients receive education multiple times throughout their hospital stay, and as each department visits hardcopies of information will be added to the folder. In the medication section of the patient education folder, a daily medication schedule will be the main component. Upon discharge, a healthcare provider will be able to do a final review of all pertinent information with the patient using the folder as a guideline.

Results: After the implementation of the patient education program, HCAHPS scores pertaining to communication about medications showed improvement. Valley Baptist Medical Center scored approximately 12% higher than the national average when examining the number of patients responding that they were “always” told the medication indication and potential side effects.

Conclusions: Valley Baptist Medical Center should continue this patient education program and expand it to other health facilities within its system.
Disclosure(s): Authors have no conflicts of interest or financial information to disclose.

S-27 An Interprofessional Approach to Promoting HIV Medication Adherence
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Not previously presented

Background: HIV medication adherence significantly lowers rates of resistance to anti-retrovirals, increases survival and quality of life, and decreases risk of disease transmission. Bexar County has the third highest rate of people living with HIV of all counties in Texas and has a need for health-literate educational tools targeted toward its HIV patient population. Interprofessional education (IPE) and Community Service Learning (CSL) prepare health professions students to work in a collaborative environment and fosters patient-centered perspectives while meeting community needs.

Objectives: Our objective was to develop patient-centered, health literate and culturally competent educational tools through interprofessional teamwork to enhance medication adherence in HIV patients in Bexar County.

Methods: The interprofessional team was represented by medicine, pharmacy, public health, respiratory therapy, and social work. A needs assessment questionnaire was developed and employed to conduct structured interviews with representatives from three HIV community organizations and a local HIV clinic. Assessment results guided the tool development process. As tools were designed, input was sought through verbal and written feedback at meetings with interprofessional faculty and community representatives.

Results: Based on the needs assessment results, the team created a health literate pamphlet and patient handout with illustrations of viral load, CD4 count, and resistance to convey the importance of medication adherence. These tools were distributed to HIV community organizations for providers to incorporate into patient education. Providers experienced with the Bexar County HIV patient population found the tools to be concise, appropriate to the population, and useful for patient-provider interactions.

Conclusion: Based on feedback from providers working closely with this HIV patient population, we believe our tools will give patients a more complete understanding about and a greater motivation to maintain adherence. Interprofessional teamwork between students strengthens the impact of health-related community projects and enhances students’ ability to provide collaborative, patient-centered care.

Disclosure: Our work was supported by a grant from the Center for Medical Humanities & Ethics at the University of Texas Health Science Center San Antonio.

S-28 University of Houston Student Society of Health-System Pharmacists: Professional Development Activities & Membership Benefits
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Not previously presented

Background: The purpose of this poster is to showcase the unique professional development activities and membership benefits of the University of Houston College of Pharmacy SSHP Chapter.

Objective: The topics that will be discussed are brown bag medication reviews, journal club presentations, the clinical internship database, and future ideas for the chapter.

Methods or Procedures: Not applicable
Results: Not applicable

Conclusion: Not applicable

Disclosures: Melanie Laine is a student at the University of Houston College of Pharmacy. She submits this poster to showcase the University of Houston College of Pharmacy SSHP chapter’s activities. She has nothing to disclose.

S-29 Eribulin (HalavenTM): A Novel Cytotoxic Chemotherapy Agent
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Not previously presented.

Background: Eribulin is a first-in-class halichondrin B analog approved by the FDA for patients with metastatic breast cancer (MBC) previously treated with an anthracycline and a taxane. Eribulin has a unique mechanism of action, which involves interaction with a distinct binding site on β-tubulin leading to G2/M phase cell-cycle arrest and apoptosis.

Objective: To review the safety and efficacy of eribulin in MBC and other advanced solid tumors.

Method: A literature search was performed using PubMed, Google Scholar, and abstracts from the American Society of Clinical Oncology Annual Meetings and the San Antonio Breast Cancer Symposia.

Results: In a pivotal Phase III study, eribulin was associated with a significantly increased median overall survival of 13.1 months compared to 10.6 months in the therapy of physician’s choice (TPC) for patients with MBC. In Phase II studies, eribulin has shown activity in non-small cell lung cancer, prostate cancer, urothelial cancer, soft tissue sarcomas, and platinum-susceptible ovarian, fallopian tube, or peritoneal cancers. The most severe (grade 3/4) adverse effects associated with eribulin include neutropenia and leukopenia. Other common toxicities of eribulin include fatigue, neutropenia, alopecia, anemia, nausea, and peripheral neuropathy.

Conclusion: Eribulin is efficacious as a single agent in MBC patients resistant or refractory to multiple chemotherapeutic drugs and has a manageable adverse effect profile. Future studies are needed to evaluate its role in combination with other agents for MBC and its place in the therapy for other cancers.

Disclosure: JN Preston has nothing to disclose. MV Trivedi has nothing to disclose.

S-30 Medication Safety Initiative: Is it Candy or Medicine?
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Not previously presented.

Background: Children often mistake various medications for candy because of their similar characteristics. Such potential dangers can be avoided through the education and continual advocacy of medication safety.

Objective: The objective of this project was to establish a program that raised awareness about the dangers of improper medication identification in hopes of preventing and protecting the community from unwanted harm.

Methods or Procedures: As part of the Medication Safety Initiative of the TSHP- Student Section Executive Committee, the formal educational program for the children included an interactive presentation that discussed the importance of proper identification and handling of medication. Following the presentation, students participated in two games that allowed
them to differentiate candy from medicine. Lastly, each child received a brochure for their parents, an activity booklet, a magnet, and stickers with the phone number to the National Poison Control Center.

Results: Seven presentations were provided to approximately two-hundred kindergarten and first grade students at three Houston-area elementary schools. The program was received positively and its success has pushed forward the expansion of the program to several neighboring elementary schools.

Conclusion: The program provided student pharmacists the opportunity to educate the community about how easily medication can be mistaken for candy, the importance of distinguishing between the two, and the steps necessary to avoid potential harm.

Disclosures: The author has nothing to disclose.

S-31 Cost-effective Use of fidaxomicin in Clostridium difficile Infections
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Not previously presented

Background: The incidence and severity of Clostridium difficile infections (CDI) are increasing at an alarming rate. The availability of a new anti-C. difficile antibiotic, fidaxomicin showed 45% decreased recurrence rate compared to oral vancomycin. 50% of patients with CDI recurrence will require re-hospitalization. However, fidaxomicin is quite costly compared to current therapies.

Objective: The objective of this study was to use a simulation model to study the potential economic effects of using fidaxomicin to prevent CDI recurrence and re-hospitalizations.

Methods: All patients with positive C. difficile toxins tests from 2006 to 2012 from the clinical microbiology lab at St. Luke’s Episcopal Hospital were entered into an Excel spreadsheet (n=1863). For all patients, admit and discharge dates, collection date of stool test, and patient demographics were recorded. Patients were stratified by CDI recurrence and re-hospitalizations. Hospital costs were assessed using Medicare customary costs. Drug costs were estimated using the Red Book.

Results: 1863 unique patients were identified with C. diff from February 2006 to February 2012. Seventy-nine patients (15%) with CDI were re-hospitalized with recurrent CDI. Re-hospitalization costs for recurrent CDI were greater than $21 million dollars. In the simulation model, use of fidaxomicin as initial first line therapy would cost $5,068,800 but saved almost $12 million in prevention of future recurrence and re-hospitalizations.

Conclusion: In this simulation model, fidaxomicin was cost effective as 1st line therapy due to decreased rates of re-hospitalizations due to recurrent CDI. The real-world applicability of this simulation data will need to be studied.

Disclosure: LD Finney has nothing to disclose. DN Shah has nothing to disclose KW Garey has active research funding from Merck, Inc and Astellas Pharmaceuticals

S-32 Descriptive Analysis of Pain During a 6-hour Glucose Clamp Utilizing Intravenous Infusion of 20% Dextrose with 0.45% Normal Saline or Phosphate Buffer
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Not previously presented

Background: A common adverse event during an intravenous infusion of hypertonic solution is pain at the infusion site due
to hyperosmolality or acidity of the infusion solution. Prior literature suggests the use of phosphate buffer to decrease acidity and pain.

Objective: To evaluate the occurrence of pain during the infusion of 20% dextrose (D20W) with either buffered glucose or 0.45% normal saline during a 6-hour glucose clamp.

Methods: An open-label, prospective study including subjects between the ages of 18 and 60 years old was conducted. The subjects were randomized to receive D20W with buffer, D20W with 0.45% normal saline, or D20W (placebo) in a single IV line. The buffer consisted of 1.24 g sodium phosphate and 0.49 g potassium phosphate per 43 mL of normal saline. To assess pain, a visual analog scale of 0-10 along with open-ended questions was utilized. Subjects were evaluated at various intervals based on the level of pain experienced. ANOVA and T-test statistical analyses were performed to determine statistical significance between treatment group and placebo (p <0.05).

Results: Eighteen subjects were recruited and evaluated, 83 % male and 17 % female. Mean age was 37.43 ± 14 years old. Pain level was 4.4 ± 1.8 (mean ± 95% CI) in the placebo group and pain level of zero in the treatment groups (p=0.18). Pain level as high as 9.5 were observed in the placebo group.

Conclusion: This study suggests a trend toward minimal pain when 0.45% normal saline or phosphate buffer was used versus placebo. Further studies are warranted to confirm the difference in pain scores.

Disclosure(s): The authors do not have any disclosures.
I hope that you attended our 2012 Annual Seminar – a bunch of folks did.

At the same time, a bigger bunch didn’t (!!)

I know, some folks have to stay home to hold down the fort while others go to meetings. Not everyone can get from East or West Boondocks, TX to Dallas, and the cost of time away, along with registration, hotels, travel, and food can be intimidating.

If you attended the meeting, you probably don’t need to read any further. If you didn’t, please continue . . .

An Annual Seminar is a great networking opportunity – 55% of our attendees come for just that reason (of course, 59% also come because of the continuing education). But it’s also a time of celebration, transition and competition, as President Cohen has outlined in his column in this issue.

Because of the way it is structured, the Seminar is both an end and a beginning; a changing of the guard. And because of the size and scope of the event, it becomes a magnificent sunset at our office, followed by a bright new sunrise. By nature we hit the ground running on the day after the meeting, working on the coming year.

Well, actually, we sleep most of the day after the meeting. And then we have about 2 weeks of catch-up to do, paying bills, sending out thank you notes, tabulating surveys, etc. So, sometime in May or June we ease into the new year.

But our focus is mostly on tomorrow.

However, I’d like to spend some time looking at the past year, because of what it represented to TSHP and health-system pharmacy. 2011-2012 was a dramatic time, in many respects.

TSHP hit a new high in membership on June 30, 2011, with 1,871 members. We ended the fiscal year (June 30, 2011) with a record surplus in our bank account, allowing the Board of Directors to move $50,000 into investments for future use and reserves.

The ‘year’ (in TSHP terms) began with a huge success of a Seminar (2011 at the Westin La Cantera in San Antonio), that was not surpassed until the 2012 event in Dallas. But that’s part of a larger trend we’re seeing, where each year the meeting exceeds expectations and breaks new records.

The number of members volunteering to serve on councils and committees continues to grow. We’ve added new local chapters (in the Valley, Corpus Christi and Abilene areas in just the past couple of years), and all of our councils and section executive committees are active and working on important, sometimes ground-breaking, projects.

We set-up a new web site and membership database during the past year. We developed a document on collaborative practices that will be published in the next issue of the TSHP Journal. Most of the fantastic continuing education programs that were held during the Seminar are now available online at the TSHP web site (http://www.tshp.org/uploads/2012_Hand-
During 2011-12 we represented the practice of health-system pharmacy and pharmacy technicians who are employed in those settings during the 2 sessions of the Texas Legislature and before regular meetings of the Texas State Board of Pharmacy. In fact, TSHP was the leader in contacting legislators at the end of the regular session when special interests attempted to change long-standing Texas law that prohibits physicians from dispensing drugs to their patients for profit. While we were unsuccessful in our attempts to add a technician to the Board of Pharmacy during the legislative session, TSHP remains committed to that goal and will continue to work on the issue.

The TSHP Technician Section succeeded in its efforts to establish a list of duties which technicians may perform within a hospital, which is now published on the Board of Pharmacy’s web site. The previous list was heavily oriented towards community practice settings, and the addition of this list shows more completely the important role that technicians play in today’s healthcare settings.

I could go on and on. In fact, I did – in the TSHP Annual Report – which is now available on the web site. If you’d like to learn more about what we did last year go to “TSHP Annual Report” under the Publications menu.

But, it’s time to get back to work on the present and future. The next 12 months are going to bring even more change and challenges. The Legislature is coming back to town. The U.S. Supreme Court will rule on the healthcare reform legislation. ASHP and TSHP will continue to work on changing pharmacy practice through implementation of the ASHP PPMI agenda. A new TSHP committee has been established to undertake a search for the Society’s next Executive Director, as I retire from 40 years of association management and a wonderful 10 years with TSHP, to see what my career will bring.

And those are just the things we know about. Oh, what a time it is going to be!