Missouri Society of Health-System Pharmacists Bi-Monthly Newsletter

APRIL 2015

Diane's Musings

by Diane McClaskey, RPh, BCPS

Ahh, spring? Sort of? What a crazy few weeks of weather! Seems like I always get tricked by Mother Nature – after that 70 degree day in January, I was ready to get the garden tilled, going through my seeds for the peas, spinach and lettuce, and then the snow came! That's ok, I probably wasn't ready anyway! There is the old wives tale that you should plant potatoes on St. Patrick's Day – back home in Iowa the date was on Good Friday. I like reading about those, and usually buy a Farmer's Almanac to look for the best planting dates. I wonder if anyone has ever studied the Farmer's Almanac recommendations – are they evidence based? Statistically significant? (Oops – sorry about that!)

This will be my last newsletter article as your MSHP President. It has been such a fun year, and I'm so honored to work with a great team! Andy and Sarah have provided amazing support, Jeremy and Laura accurate and timely reports, and our Centric team of Sara, Bill, Erin and now Robin have been a joy to work with and have tolerated all of my pestering! Davina has led an amazing Programming & Education Committee planning our Spring Meeting, Genny is reworking our website and improving communications, and Ashley and Centric are working hard on member engagement. Christine and David with Public Policy must have roller skates on as they are very busy working on new position statements and following the Legislature! Megan has done an amazing job getting students involved with the PPMI project, presenting a poster at Midyear, and who hasn't loved our newsletters filled with great information from Cassie! Our affiliate representatives have also been an integral part of this successful year, and I'm sending a special thanks to Diana Hoelscher, David Wolfrath, Christy Burrows, Hannah Pope and Katie Tellor for their engagement.

I thought I would highlight some of the MSHP successes this year:

- Poster Presentation at Midyear with SSHP Presidents from UMKC and StLCOP and Megan Musselman
- Hospital Working Group Reconvened
- External Audit of Finances
- MSHP Dashboard
- Rural Pharmacist Member of PPMI Task Force
- Technician Member of PPMI Task Force
- Vendor Liaison added to Board of Directors
- Student Needs Assessment Survey
- Board of Director Performance Assessment
- Technician Training Survey
- Identification of Short Term Volunteer Opportunities
- Public Service Announcements during National Hospital and Health System Pharmacy Week
- Weekly e-Blast Launched
- Increased Social Media Opportunities
- Winner of the MSHP/KCHP Facebook Contest!!

So thanks again to the amazing group of Board of Directors, Committee Chairs/Vice-Chairs, Affiliate Representatives, Students and the Centric Team!

I've enjoyed our visits together, and stay in touch!! Now off to the garden….
Diane

Featured Job Posting on Page 10!
MSHP Award Round-Up on Page 9

Table of Contents:

Hospital Pharmacy Regulatory Update

by Bert McClary, RPh

The Public Policy Committee meets by telephone at 4:00 p.m. on the first Thursday of each month. This report includes topics discussed by the committee and some personal observations.

SB 808 Webinar

Based on many questions received by DHSS, BOP and MHA regarding implementation of SB 808, MHA sponsored a webinar on January 23 presented by representatives from BOP and DHSS. Questions related to the BOP Class B license, distribution between facilities, MTS and joint BOP/DHSS rulemaking were discussed.

The discussion emphasized statutory language and provided many important additional clarifications and guidelines, including:

- The new provision for a Class B pharmacy to dispense based on a medication order did not address the issue of generic substitution, and Class B pharmacies should consult their legal counsel for advice on this.
- Distribution to Class B pharmacies from the hospital without a drug distributor license is one-way, and distribution between locations and back to the hospital is prohibited.
- The terms inpatient and outpatient are not legally defined and should be avoided in determining BOP and DHSS jurisdiction. A drug prepared within and administered to a patient within the DHSS licensed hospital premises (regardless of patient billing status) is under DHSS jurisdiction.
- Proposed rule language from DHSS defines hospital premises and examples of locations that do and do not meet the requirements were provided. Hospitals should consult legal counsel regarding licensed premises in relation to a Class B pharmacy license.
- Only pharmacists and technicians may have independent access to a Class B pharmacy in a clinic. A nurse with access must be a registered pharmacy technician.
- Pharmacists authorized to use MTS protocols should be credentialed and privileged according to CMS and DHSS rules. Proposed DHSS rule language for Medication Management and Pharmacy Services will clarify DHSS requirements.
- Hospitals may contract with outside pharmacists to provide services, including MTS protocols if the pharmacist is trained by the facility and follows facility policies and procedures.
- The BOP Hospital Advisory Committee will review and recommend rules jointly promulgated by BOP and DHSS, but will not develop rule language.

Slides from the webinar that address some issues are available but do not provide information on the bulk of the questions. The slides are available from MHA at **http://web.mhanet.com/advocacy-and-regulation/hospital-laws-and-regulation/state-regulations/** under Missouri Hospital and Professional Licensure Rules. Unfortunately, the video recording was corrupted and is not available. The webinar provided important information that all health system pharmacists should have access to and it is hoped that a repeat presentation can be made.

BOP Hospital Advisory Committee

As of the Newsletter deadline, the names of the appointees and the date of the first meeting have not been announced. Although this committee will not develop rule language, it is hoped that it will have authority to discuss topics that have rule potential. The purpose of the previous Hospital Working Group was to discuss a wide range of issues that need clarification and guidance from BOP and DHSS, and there is insufficient time during regular Board sessions for these complex discussions. Without discussion and formal recognition of the issues, practitioners will continue to be unfairly restricted or will engage in practices that may not be in conformance with the law. In July during their strategic planning session the Board members authorized the group to re-convene, but that has not occurred despite requests.

I believe it would be more functional for MSHP to sponsor a committee to review and make recommendations relating to practice standards, interpretive guidance for rules and other regulatory issues. When current rule language is not clear and guidance from BOP and DHSS is not available, the committee could develop guidance for practitioners. When necessary, actual rule or statutory language could be

proposed, or key points for rulemaking could be suggested to the agencies.

Joint sponsorship of the committee with MHA would help to ensure industry-wide agreement and give credence to recommendations. BOP and DHSS should participate in the discussions and provide input, especially when it appears that recommendations might not be in conformance with existing law. A similar and very successful group of pharmacists, nurses, administrators, professional associations and agency representatives was convened by MHA and DHSS to propose changes to DHSS hospital licensing rules. MPA should also be invited to participate in keeping with our previous efforts at inclusiveness, in order to provide openness regarding MSHP's goals to advance professional practice, and to encourage community pharmacists to develop similar goals.

Many specific questions have been received and many specific topics have been proposed for discussion. Although the SB 808 webinar addressed many questions, some deserve additional discussion and many others are unaddressed. Live, face to face discussions produce the best results for complex issues, as evidence of safety and examples for innovative practices can be shared and discussed openly. Some examples of topics are:

- Full-circle distribution authority between Class B pharmacy locations.
- Generic and therapeutic substitution for outpatient dispensing based on medical orders.
- The definitions of and the relationships between MTS protocols, nursing medication protocols, and CMS standing orders and protocols.
- Credentialing and privileging pharmacists according to CMS and DHSS rules.
- Format and content of MTS protocols, and the relationships between pharmacists, physicians and the medical staff committee.
- Application of current BOP MTS rules in hospital clinic settings.
- The use of hospital MTS protocols by non-employee contracted pharmacists.
- Administering medications by pharmacists, including emergency departments.
- Requirements for technician education and training, and expanded technician roles.

State and Federal Legislation

- There are several prescription drug monitoring program bills in process. SB 63 is sponsored by Sen Sater, a pharmacist, and SB 111 is sponsored by Sen Schaaf, a physician who has opposed traditional PDMP processes in the past. HB 130 by Rep Rehder has been passed by the House. Persons involved in lobbying for the act this year are optimistic.
- HB 198 prohibits denial of coverage for prescriptions dispensed in an effort to synchronize the refilling of prescriptions for a patient.
- SB 119 modifies the Prescription Drug Repository Act and transfers responsibility to the Board of Pharmacy from DHSS. The act provides a process to return and re-dispense certain medications, primarily from LTCFs, to certain low-income eligible patients.
- SB 313 modifies the authority for APRNs to prescribe controlled substances by removing certain restrictions on CIII-V and providing authority for CII.
- CMS interpretive guidelines have been recently updated for critical access hospitals. They provide significant changes in requirements for compounded sterile and non-sterile preparations, including compliance with USP 797 and 795. There are additional changes in medication distribution and administration as well. It is anticipated that these changes will be adapted by CMS to the general acute hospital guidelines as well.
- Federal provider status bills have been introduced in both the House and Senate and have been co-sponsored by approximately 60 legislators. These companion bills provide authority for pharmacists to bill Medicare for services provided to patients in medically underserved areas. One legislator from Missouri has signed as a co-sponsor, thanks to efforts by Daniel Good.

Strategic Planning

Strategic planning each year typically occurs in late spring after the new officers are settled in their new responsibilities. This year I would like to suggest an additional focus on long-term goals as well. MSHP has typically supported ASHP long term practice initiatives, such as the previous Pharmacy Technician Initiative and the current Pharmacy Practice Model Initiative, which provides recommendations for change in clinical practice, technology, distribution and technician roles. Many states allow physician/pharmacist

practice arrangements similar to Missouri and several states have codified advanced practice pharmacist roles. The recent draft of ASHP's Statement on the Role of the Pharmacy Technician advocates for uniform education and training, licensure by the state board of pharmacy, and advanced roles to include all distributive functions that do not require clinical judgement of a pharmacist.

Such changes in practice roles are obviously based on regulatory allowances. If we want to pursue similar changes in Missouri, we should develop realistic long term goals and interim action steps. MSHP currently has a PPMI Committee and a Public Policy Committee that should coordinate these regulatory efforts.

A five year plan to achieve these goals may or may not be realistic, but there is another reason to select the year 2020 for high achievement: it will be the 50th anniversary year of the founding of MSHP, our golden anniversary. I suggest that we title this initiative *"Going for the Gold: Strategic Planning for 2020."*

MSHP R&E Foundation News

by Tom Zlatic, Ph.D.

Call for R&E Board Nominations

Please consider nominating yourself or a colleague for one of two positions on the MSHP R&E Foundation. The primary responsibility of a Board Member is to participate in a monthly phone call to plan activities of the MSHP R&E Foundation. Nominations can be submitted to Andy Smith at smithandr@umkc.edu. Board membership provides an opportunity to become more familiar with . . . .

Research Corner

The R&E Foundation Research Corner is an excellent vehicle for highlighting the research that you or your organization is conducting. Please visit the MSHP website for more information: (http://www.moshp.com/research-education-foundation/research-corner/). Please contact Paul Juang at paul.juang@stlcop.edu if you wish to share your research with others within the state of Missouri.

R&E Foundation Donation

Your tax-deductible donation to the R&E Foundation will allow us to continue sponsor of many activities to support the research and education efforts of Missouri health-system pharmacists. The donation process is simple: download the pledge card on the MSHP website, http://www.moshp.com/research-education-foundation/contributors/. Your support is much appreciated.

MSHP R&E Fundraising Campaign: Every Member, Every Year

Have you ever wondered how the MSHP R&E Foundation provides grants and awards for education and research to advance the practice of pharmacy in the state of Missouri? The answer is from generous donations from MSHP members like you!

What does the Foundation provide?

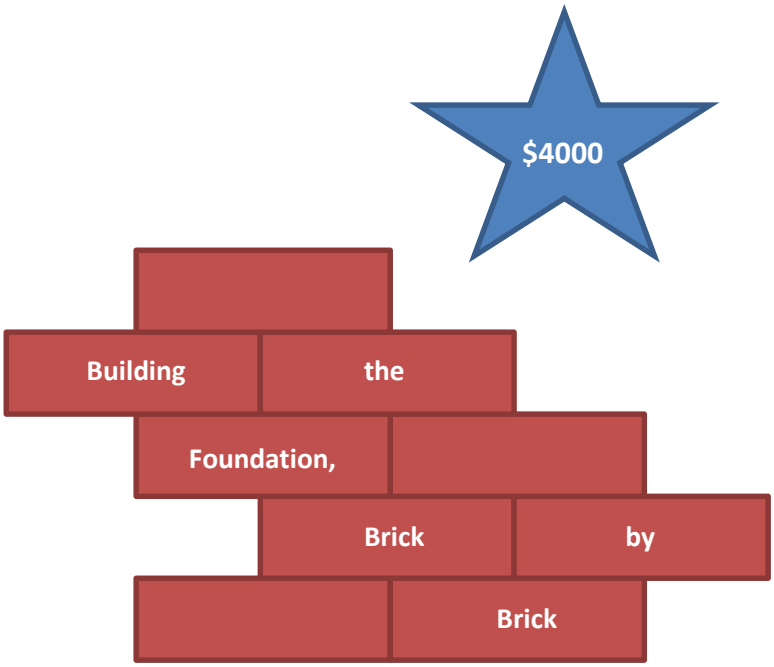
- Awards for the clinical skills competitions for students at Missouri colleges of pharmacy
- Grants to offset the cost of traveling to the ASHP Midyear for Missouri students to compete in the National Clinical Skills Competition
- Awards for outstanding posters at the MSHP Spring Meeting
- Platform presentations at the MSHP Spring Meeting for outstanding original research projects
- The Best Practice Award to a pharmacy program demonstrating a novel practice that improves patient care;
- The Thomas J. Garrison Award to pharmacists who have sustained contributions to pharmacy advancement
- Newsletter articles regarding specific topics useful in setting up or conducting research projects
- Webinars that provide educational materials regarding research and
- pharmacy
- Interviews that highlight Missouri Researchers

Help us Meet our Goal for 2015!
If every member of MSHP makes a donation to the MSHP R&E Foundation every year, it will be able to continue to provide these awards. Contributions to the R&E Foundation are considered charitable contributions by the IRS.

The MSHP R&E Foundation has a fundraising goal of $4000 this year. You can donate online at moshp.org.

Building the Foundation, Brick by Brick
If you donate any amount, you name will be placed on a virtual brick wall on the R&E Website. The size of the brick will be proportionate to the size of the donation. The website will also contain a fundraising thermometer showing how close the Foundation is to the goal of $4000. Make your donation and track your impact on the website.

Any amount you can donate would be greatly appreciated. Every member, every year!



Member Spotlights

Congratulations to the following members who have been recently recognized:

On Tuesday, March 10th, the ASHP Practitioner Recognition Program announced the individuals selected as ASHP Fellows for 2015. MSHP is excited to congratulate its members **Daniel Good** and **Brian O'Neal**, who were selected! This award is intended to recognize excellence in pharmacy practice and promote public awareness of pharmacists who have distinguished themselves in practice. The Fellows will be honored on **Tuesday, June 9, 2015**, during the ASHP Summer Meetings and Exhibition in Denver. These individuals have been bestowed with the title of "Fellow" by ASHP in recognition of the excellence they have achieved in pharmacy practice. The ASHP Practitioner Recognition Program rewards excellence in pharmacy practice by granting recognition through the FASHP designation.

ASHP Member Spotlights:

- **Amy Sipe, RPh** – ASHP Clinical Specialists and Scientists – Feb 2015
- **Jeff Little, PharmD, MPH, BCPS** – ASHP Pharmacy Practice Managers – Feb 2015

On Rotation with Centric

by Kay Riedl, PharmD Candidate, KU School of Pharmacy

From Erin Roberts, Centric's Marketing and Communications Director: Last year Centric Management and Consulting created a unique rotation opportunity to pharmacy students in Kansas - working for KCHP and MSHP. This March, we were fortunate to gain Kay Riedl as our very first pharmacy intern. She's been a great asset to the MSHP association management team operated by Centric Management & Consulting. We've asked her to share a little about her background and experience:

Hi, my name is Kay Riedl and I am a 6P pharmacy student on rotation with Centric Management and Consulting for the month of March. I was born and raised in El Dorado and completed two years of prerequisite courses at the University

of Kansas before then entering into the KU School of Pharmacy. This fourth and final year in the School has been my favorite thus far. It has been a joy to experience different areas within the profession through my APPE rotations.

Centric provides its clients (associations like MSHP, for example) assistance with marketing, event planning, and membership administration. Centric staff also participates in various board meetings within the association. Earlier this month, I had the opportunity to help organize a KCHP Legislative Reception at Centric headquarters. I was able to meet a number of legislators and advocate for the advancement of the profession, an important part of our role as a pharmacists. I have also spent time easing the transition to a new a new computer database, which is an important part of any company. Additionally, I had the privilege of attending the Missouri Society of Health-System Pharmacists' Spring Meeting which took place March 20th - 21st. I saw first-hand the hard work invested by both the management and volunteer committees into annual events such as these. Before this month, I had no idea association management even existed, and I am extremely grateful now to have honed a different skill set during this unique rotation. I have also been inspired to stay involved in professional organizations following my graduation in May.

Featured Article:

New MRSA Targeted Therapies: An Overview

Steven Asbill, PharmD and R. Drew Jett, PharmD, BCPS

Health Care
University of Missouri Health System

Background

First described in 1961, the incidence of methicillin-resistant *Staphylococcus aureus* (MRSA) has increased worldwide in both community and hospital settings. Originating shortly after the introduction of methicillin two years earlier, MRSA has burdened clinicians for decades due limited therapeutic options and a relentless increase in incidence.[1] A recent report by the Centers for Disease Control found approximately 75,000 cases of invasive MRSA in 2012 alone.[2]

Methicillin resistance is thought to occur by an increase in expression of the *mecA* gene which codes for penicillin-binding protein 2a (PBP2a), and enables the organism to divide and grow in the presence of β-lactam antibiotics due to lower binding affinity for β-lactams.[3] As MRSA has become commonplace in hospitals, practitioners have turned to vancomycin as the treatment of choice for MRSA infections. Increasing resistance to vancomycin has led to the development of several new treatment options for consideration. Agents of particular interest to this newsletter include ceftaroline, dalbavancin, tedizolid and oritavancin.

Review of New Agents:

Ceftaroline fosamil[3-5] (Teflaro®)

Ceftaroline is a fifth generation cephalosporin antibiotic indicated for the treatment of community-acquired pneumonia and complicated skin and skin structure infections. Ceftaroline fosamil is a prodrug rapidly converted to bioactive ceftaroline by plasma phosphatases. The agent inhibits bacterial cell wall synthesis by binding to penicillin-binding proteins 1 through 3. Binding to these proteins prevents the final step of peptidoglycan synthesis and thus arrests cell wall development. Due to strong affinity for PBP2a, ceftaroline is active against MRSA in addition to activity against methicillin-susceptible *S. aureus* (MSSA).

Ceftaroline undergoes renal elimination, with dose adjustments beginning with a CrCl of 50 mL/min or lower (See Table 1 for standard dosing of agents). No dose adjustment is necessary for those with hepatic impairment. There are no significant drug interactions with ceftaroline.

CANVAS I and II trials compared ceftaroline monotherapy with a combination of vancomycin/aztreonam for complicated skin and soft tissue infections (cSSSI). The primary outcome was resolution of all signs and symptoms of cSSSI defined as elimination of the need for further antimicrobial therapy. Ceftaroline was shown to be non-inferior to the combination of vancomycin/aztreonam in both studies. FOCUS I and II trials compared ceftaroline versus ceftriaxone for the treatment of community acquired pneumonia. Ceftaroline was shown to be non-inferior to ceftriaxone in both trials.

Tedizolid phosphate[6-10] (Sivextro®)

Tedizolid is an oxazolidinone, similar in structure to linezolid. Tedizolid is a prodrug which, after conversion in the liver to tedizolid phosphate, binds to the 50S bacterial ribosome unit. By binding to this protein, bacterial translation and protein synthesis is inhibited. Tedizolid recently garnered FDA approval in June of 2014 for acute bacterial skin and skin structure infections (ABSSSI). Specifically, its spectrum of activity includes infections caused by gram positive organisms such as *S. aureus* (MSSA and MRSA). The agent is bacteriostatic in nature.

Due to metabolism by phosphatase, there are no dose adjustments for those with hepatic or renal impairment. Oxazolidinones have inherent monoamine-oxidase inhibition properties, and thus have notable drug interactions with agents which potentiate serotonin such as selective-serotonin reuptake inhibitors and monoamine-oxidase inhibitors.

Sivextro® gained approval based upon the results of ESTABLISH-1 and ESTABLISH-2 trials. These studies were each multicenter, multinational, double-blind non-inferiority trials comparing once daily tedizolid 200 mg for six days versus linezolid 600 mg twice daily for 10 days in patients with ABSSSI. In ESTABLISH-1, the primary outcome was cessation of lesion spread and absence of fever. The primary outcome in ESTABLISH-2 examined whether the agents reduced lesion size by 20% or more. The results from both trials showed tedizolid was noninferior to linezolid in regard to primary endpoints and recurrence of illness up to 14 days post-therapy.

Dalbavancin[11,12] (Dalvance®)

Dalbavancin is a second generation lipoglycopeptide approved in May of 2014 for the treatment of ABSSSI caused by gram positive organisms including *S. aureus* (MSSA and MRSA). The agent exerts its bactericidal effect by inhibiting cell wall synthesis in a manner similar to that of vancomycin.

There are no major drug interactions known with dalbavancin. In patients with a creatinine clearance CrCl greater than 30 mL/minute, no dosage adjustment is necessary. For those with CrCl less than 30 mL/minute, reduce initial dose to 750 mg followed by 375 mg as a single dose one week later. No adjustment is necessary for patients with hepatic impairment. However, dalbavancin has not been studied in those with moderate to severe hepatic impairment, and its use should warrant caution.

Adult patients with cellulitis, major wound infections or cellulitis were enrolled in two Phase 3, randomized, double-blind trials known as DISCOVER 1 and DISCOVER 2. Patients received either two weeks of daily vancomycin or a two-dose regimen of dalbavancin. Participants who received vancomycin were given an option to switch to linezolid after three days of therapy. The primary outcome of the trials looked at the increase in baseline lesion area 48-72 hours post-initiation of therapy. Patients also had

to be afebrile by this point in treatment. The study concluded dalbavancin was non-inferior to the vancomycin and linezolid combination utilized in the second treatment arm.

Oritavancin[13-15] (Orbactiv®)

Oritavancin is a glycopeptide with concentration-dependent bactericidal activity indicated for use in ABSSSI. Like the aforementioned agents, oritavancin is labeled for infections caused by gram positive organisms including *S. aureus* (MSSA and MRSA).

Administered as a single intravenous dose of 1200 mg, oritavancin has an extended half-life of 393 hours. Oritavancin requires no adjustment for decreased renal or hepatic function. Due to its long half-life, it is not possible to streamline MRSA coverage once oritavancin is administered. Oritavancin inhibits CYP 2C9 and 2C19 and induces CYP 3A4. Pertinent drug interactions include warfarin (increases effect), and aripiprazole (decreased concentration).

Oritavancin garnered its approval for ABSSSI based on the results of the SOLO I trial, which was followed by the SOLO II trial. These studies found a single dose of 1200 mg of oritavancin to be non-inferior to twice-daily vancomycin administered for 7-10 days. Additionally, oritavancin had a safety profile comparable to that of vancomycin. Patients were followed for 60 days post-dose to determine incidence of side effects.

Table 1: Antibiotic Dosing, Indications, Adverse Effects and Cost

Antibiotic	Standard Dose	Indications	Adverse Effects	Acquisition Cost[15]
Ceftaroline	600 mg IV twice daily for 5-14 days	ABSSSI caused by gram-positive bacteria Community-acquired pneumonia	Positive Coombs' test without hemolysis (11%), insomnia (4-5%) and headache (3-5%)	$151.62 per dose
Tedizolid	200 mg PO once daily or as IV infusion once daily for 6 days	ABSSSI caused by gram-positive bacteria	Nausea (8%), headache (6%), and diarrhea (4%)	$2,124 per treatment course
Dalbavancin	1000 mg IV on day one, followed by 500 mg IV one week later.	ABSSSI caused by gram-positive bacteria	Nausea (5.5%), headache (4.7%) and diarrhea (4.4%), and Red-Man Syndrome (unknown frequency)	$1,788 per 500 mg dose
Oritavancin	1200 mg IV once	ABSSSI caused by gram-positive bacteria	Nausea (10%), headache (7%), dizziness (3%) and tachycardia (3%)	$3,480 per dose

Summary: As MRSA resistance rates increase across the country, the stewardship of new agents active against this organism will continue be important. In comparison to traditional vancomycin therapy, the above agents offer more simplified dosing schemes, but do not show superiority to other anti-MRSA therapy. Current FDA approvals support the use of the aforementioned agents specifically in ABSSSI, but ceftaroline is also indicated in community acquired pneumonia. Data for other indications including bacteremia is lacking at this time. Cost-benefit analysis is also a point of interest for practitioners as the above therapies are associated with much greater acquisition costs compared to traditional MRSA treatment such as vancomycin and linezolid. At this time, empiric treatment with a new agent instead of traditional therapy is not necessary unless there is known resistance to

traditional agents. Another consideration for these agents is long term safety. All of the recently approved agents are lacking long term safety data and repeated exposures. For patients with frequent ABSSSI recurrences, use caution in treating with new agents.

References

1. Barber M. Methicillin-resistant staphylococci. J Clin Pathol 1961; 14:385.
2. Centers for Disease Control and Prevention. 2012. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin - Resistant Staphylococcus aureus, 2012.
3. Teflaro (ceftaroline fosamil) [prescribing information]. St. Louis, MO: Forest Pharmaceuticals Inc; December 2013.
4. Corey GR, Wilcox M, Talbot GH, et al, "Integrated Analysis of CANVAS 1 and 2: Phase 3,Multicenter, Randomized, Double-Blind Studies to Evaluate the Safety and Efficacy of Ceftaroline Versus Vancomycin Plus Aztreonam in Complicated Skin and Skin-Structure Infection," *Clin Infect Dis*, 2010, 51(6):641-50.
5. File TM Jr, Low DE, Eckburg PB, et al, "Integrated Analysis of FOCUS 1and FOCUS 2: Randomized, Double-Blinded, Multicenter Phase 3 Trials of the Efficacy and Safety of Ceftaroline Fosamil Versus Ceftriaxone in Patients With Community-Acquired Pneumonia," *Clin Infect Dis*, 2010, 51(12):1395-405
6. Klein E, Smith DL, Laxminarayan R. Hospitalizations and deaths caused by methicillin-resistant Staphylococcus aureus, United States, 1999–2005. Emerg Infect Dis 2007;13:1840–1846.
7. Sivextro (tedizolid) [prescribing information]. Lexington, MA: Cubist Pharmaceuticals U. S.; June 2014.
8. Kisgen JJ, Mansour H, Unger NR, et al. Tedizolid: a new oxazolidinone antimicrobial. *Am J Health-Sys Pharm*. 2014;71:621-633.
9. Prokocimer P, De Anda C, Mehra P and Das P. Tedizolid phosphate vs linezolid for treatment of acture bacterial skin and skin structure infections: the ESTABLISH-1 randomized trial. *JAMA* 2013; 309(6):559-69.
10. Moran GJ, Fang E, Corey GR, et al. Tedizolid for 6 days versus linezolid for 10 days for acute bacterial skin and skin-structure infections (ESTABLISH-2): a randomized, double-blind, phase 3, non-inferiority trial. *Lancet Infect Dis* 2014; 14:696.
11. Dalvance (dalbavancin) [prescribing information]. Chicago, IL: Durata Therapeutics; May 2014.
12. Boucher HW, Wilcox M, Talbot GH, Puttagunta S, Das AF, Dunne MW. Once-weekly dalbavancin versus daily conventional therapy for skin infection. *N Engl J Med*. 2014;370(23):2169-2179.
13. Corey GR, Kabler H, Mehra P, et al. Single-dose oritavancin in the treatment of acute bacterial skin infections. N Engl J Med 2014;370:2180-2190.
14. Corey GR, Good S, Jiang H, et al. Single-dose oritavancin compared to 7-10 days of vancomycin in the treatment of gram-positive acute bacterial skin and skin structure infections; the SOLO II non-inferiority study. Clin Infect Dis. 2015;60:254-262.
15. Lexicomp Online® , Pediatric & Neonatal Lexi-Drugs® , Hudson, Ohio: Lexi-Comp, Inc.; Accessed February 23, 2015

MSHP Award Round-Up

Congratulations again to all of the MSHP members who competed and were awarded for a job well done:

- **Best Original Poster:** "All about that Basal: No problems" by Omik Patel, PharmD
  - **2nd Place:** "Impact of Pharmacist Discharge Counseling on Hospital Consumer Assessment of Healthcare Providers and Systems Survey (H-CAHPS) Score" by Amanda Lee Troup, PharmD
- **Best Encore Poster:** "Alerts and alarms associated with smart pumps: Achieving a healing environment by avoiding annoyances" by Kelly Burch, PharmD
  - **2nd Place:** "Examination of the current prescribing practices of oseltamivir in a large, academic hospital" by Ashley Ausmus, PharmD, BCPS
- **Best Student Poster:** "Evaluating the frequency of intravenous vasopressor extravasation before and after reduction in the standard vasopressin drop concentrations at a metropolitan medical center" by Andrew Snyder, PharmD Candidate 2015
  - **2nd Place:** "Utilizing student pharmacists to increase awareness and implementation of the pharmacy practice model initiative" by Stephanie Berrong, PharmD Candidate 2015

- **First Place Platform Presentation:** "Evaluation of the impact of warfarin monitoring and dosing by pharmacists on elevated international normalized ratio (INR) results in hospitalized patients" by Justin Virtue, PharmD, CACP
    - **2nd Place:** "Root Cause Analysis of Hyperglycemia" by Jeremy John, PharmD

Congratulations to the following awardees to their dedication to the field of pharmacy and MSHP:

- **Pharmacist of the Year:** Steven Stoner, PharmD, BCPP
- **Volunteer Award:** David Wolfrath, PharmD
- **Rising Stars:** Stephanie Berrong and Stephanie Burton, PharmD Candidates
- **Garrison Award:** Joel Hennenfent, PharmD, MBA
- **Best Practice Award:** Mercy Springfield: Drug Shortage Task Force

Save-the-Date! KCHP/MSHP 2016 Annual Meeting will be held April 22nd-23rd 2016 at the Kansas City Convention Center.

Continuing Education (CE) Article Information:

In case you missed it, here's a link to the last CE article released early last month, "Keeping up with Anticoagulation: Recommendations for Patients with Atrial Fibrillation and Acute Coronary Syndrome" by Kate Voltz, PharmD, and Shane Austin, PharmD: http://files.ctctcdn.com/80119d75301/d082abd2-1bd2-480d-a073-87e38d048f67.pdf .

Please return the completed quiz to Robin Moser (rmoser@centrichq.com) or by fax to (785) 271-0166 by May 15th 2015 to receive credit.

Upcoming Newsletter and CE Article Topics:

- May/June 2015: Oncology
- July/August 2015: Cardiology
- September/October 2015: Transitions of Care

Featured Job Posting:

Director of Pharmacy
St. Mary's Hospital
SSM St. Mary's Health/ Mexico, MO

As the Director of Pharmacy (PIC), you will oversee all pharmacy operations including planning, organizing, controlling, and supervising activities, according to hospital policies, standards of practice of the profession, and state and federal regulations. You will recommend innovations in the practice and function of the pharmacy to hospital administration and carry out mutually agreed upon programs. You will oversee a staff comprised of 2 Pharmacists and 6 Pharmacy Technicians. This position consists of 2/3rd administrative duties and 1/3 dispensing duties (staffing every third week). Paragon is the pharmacy software system that is currently utilized, with a system conversion to EPIC on the horizon.
In this role, you will have a full support team available to you – from Regional Vice President, Regional Clinical Director, and 340b Specialist to a Regulatory Specialist, Drug Information Specialist and more.

Qualifications:

· At least 1 year recent work experience in a leadership role in an inpatient hospital setting.

· Pharmacy Degree is required (PharmD is preferred).

· Current MO Pharmacist License in good standing or willingness to obtain MO pharmacist license is required.

Facility:

St. Mary's Hospital – Audrain opened in 1918 as Audrain Medical Center. Today, the 89-bed community hospital offers a range of services including emergency care, cardiology services, medical imaging, men's health services, women and child services, and diabetes education. The hospital features the J.B. & Greeta B. Arthur Cancer Center, the Jordan-Waters Heart Center and Healthworks Rehabilitation services. The pharmacy is open Monday through Friday 7am-7pm, Saturdays & Sundays 7am-5pm. When the pharmacy is closed, there is a remote order entry service that provides pharmacy support. The day to day management of the pharmacy is outsourced to CPS.

Rewards:

Competitive pay rate and benefits including Medical/Dental/& Vision Insurances; 401(k) with a match, Paid Time off Program-including sick, holiday and vacation all in one, Company Paid Short and Long term Disability, Basic and Supplemental Life Insurance, Medical Flex and Dependent Care Accounts.

About CPS:

We are Comprehensive Pharmacy Services, the nation's largest pharmacy services provider for acute-care hospitals, long term acute-care, behavioral health systems, and specialty hospitals throughout the US, Puerto Rico and USVI of St. Thomas. Since 1971 we have delivered pharmacy service value through financial, operational, clinical, therapeutic, and regulatory expertise. And we're growing at a breathtaking rate. You will discover, along with almost 2,000 other employees; that CPS is a company you'll be proud to grow with.

EOE of Minorities/Females/Vets/Disability; No agencies please.

Questions/Comments

If you have any questions or comments about MSHP Newsletter, please don't hesitate to contact the Newsletter Chair, Cassie Heffern, PharmD, BCACP (cassie.heffern@coxhealth.com) or any other newsletter committee member.

Anastasia Armbruster, PharmD, BCPS, Co-Chair (anastasia.armbruster@stlcop.edu)
Katie Tellor, PharmD, BCPS (katie.buehler@stlcop.edu)
Kori Hess, PharmD (kori.hess@hotmail.com)
Sarah Boyd, PharmD, BCPS (sarah.boyd2@mercy.net)
Amen Ogunmekan, PharmD (amenaghawon.ogunmekan@tmcmed.org)
Sara Neiswanger (sara@centrichq.com)
Erin Roberts (eroberts@centrichq.com)